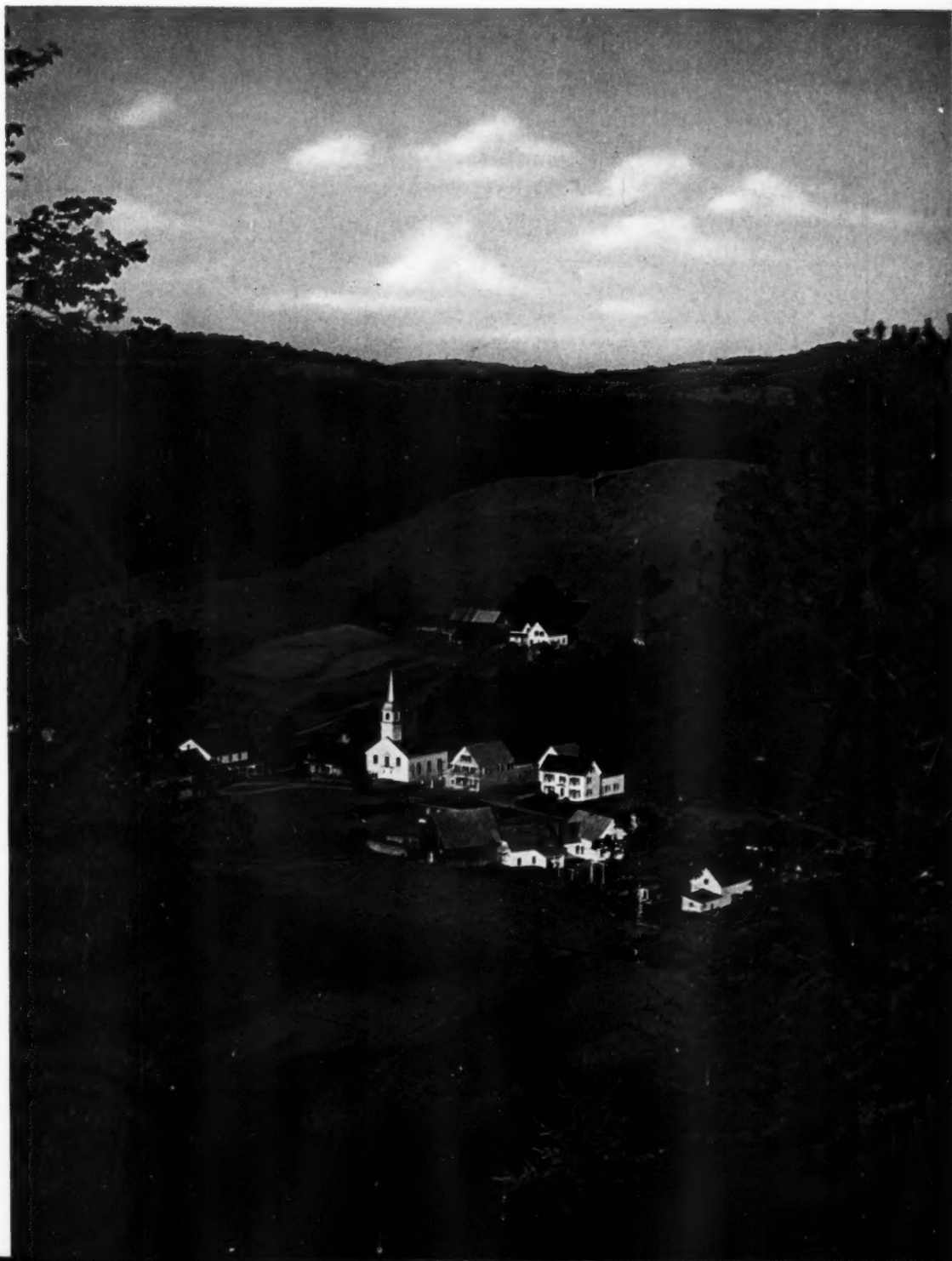


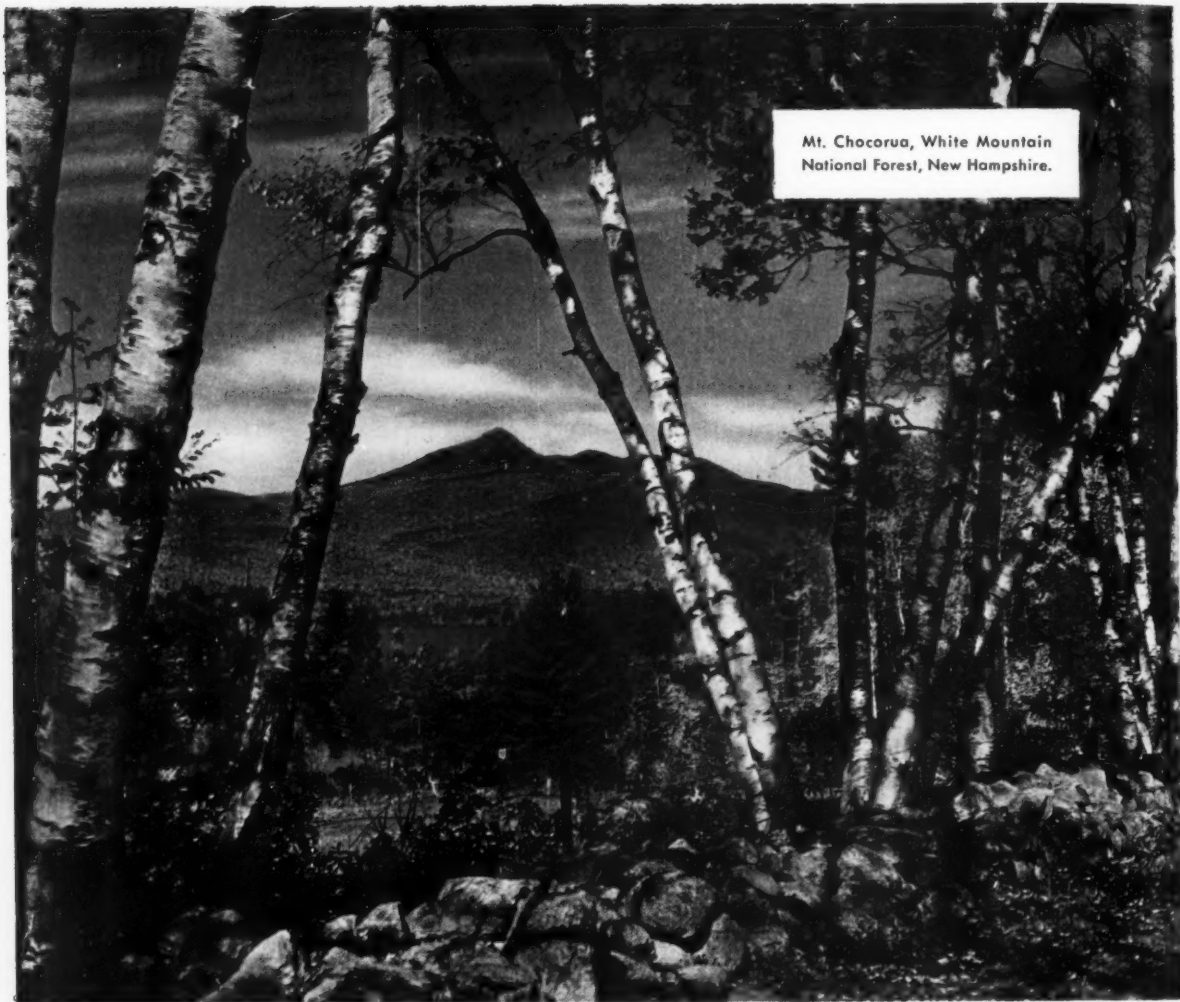
American

FORESTS

SEPTEMBER, 1956

50 CENTS





Mt. Chocorua, White Mountain
National Forest, New Hampshire.

America's National Forests—*where every man's a king*

Back in the Middle Ages, the word *forest* designated an area set aside for the pleasure and profit of the king. And as late as 1776 in New Hampshire's White Mountains, the tallest and straightest trees were marked with the King's Arrow and reserved for masts in His Majesty's royal navy.

Today, many of these same New Hampshire woodlands are reserved for you as part of the National Forest system. They offer scenic drives through famous notches, skiing on the slopes of New England's highest mountain, swimming, fishing and almost everything else that goes into a memorable outdoor vacation.

White Mountain National Forest is typical of 149 National Forests located in 38 states and two territories. These forests total over 180,000,000 acres — an area larger than Texas.

Owned by the people of the United States, they are dedicated to the wise use of timber, grass, wildlife, soil and water.

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FREE Tour Information

If you would like to visit any of the National Forests, or drive anywhere in the U. S. A., let us help plan your trip. Write: Tour Bureau, Sinclair Oil Corporation, 600 Fifth Avenue, New York 20, N. Y. — also ask for our colorful National Parks map.

SINCLAIR SALUTES THE AMERICAN FORESTRY ASSOCIATION. The oldest national forest conservation group, the AFA is devoted to the advancement of conservation and the fuller use of our forest land to provide more wood, water, wildlife and recreation for all. The Association was instrumental in the creation of the Forest Service in the U. S. Department of Agriculture and has made many other important contributions to the cause of good forestry.

SINCLAIR
A Great Name in Oil

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A Healthy Influence

When the Sinclair Oil Corporation resolved to stimulate greater public interest in our national parks and forests with a series of nation-wide public service advertisements, it joined distinguished company.

For several years, the Tree Farm advertisements of the Weyerhaeuser Timber Company have been winning public acclaim and coping national advertising honors. Another front runner is the Caterpillar Tractor Company. This firm's prize-winning forest fire prevention advertisement "Ever Watch A Forest Die?" was published in the May issue of *American Forests*. And there have been others equally good.

The Sinclair series is pitched on this same lofty appeal plane, and unless all the signs are wrong another winner is in the making here in the public service advertising field. Sinclair's latest in a series of salutes to national conservation organizations is presented on the opposite page.

Speaking from an editorial position, we do not know how much gasoline or oil, forest products, tractors or whatever advertisements of this type may sell. We do know that ads of this type increase the prestige of the firms using them because some of our readers have told us so.

Accordingly, we salute the Sinclair people and all the other firms now engaged in this type of promotion in the public interest. It is having a healthy influence—EDITOR.

American FORESTS

PUBLISHED BY THE AMERICAN FORESTRY ASSOCIATION

James B. Craig
Editor

Betty Fadeley
Assistant Editor

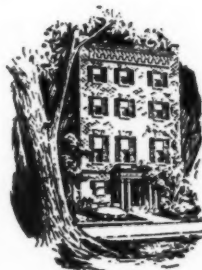
James J. Fisher
Art Director

Volume 62, No. 9 | September, 1956

CONTENTS

- 4 GUSTAVSON TO ADDRESS ANNUAL MEETING BANQUET
- 6 LANDOWNERSHIP COMMITTEE • *Carl D. Shoemaker*
- 8 MINNESOTA'S FOREST HISTORY FOUNDATION • *Marcia Morrison*
- 9 WASHINGTON LOOKOUT • *Albert G. Hall*
- 11 EDITORIAL—Frisking In The Fields?
- 12 A TEST PILOT TAKES TO TREE FARMING • *Robert Hertzler*
- 16 MISSOURI'S FORESTRY CAMPS • *Wildon E. Roberts*
- 19 500 FOR SMOKEY
- 20 NATIONAL FOREST SUMMER HOMES • *M. D. Bellomy*
- 22 AN ENCOURAGING START ON AFA STUDIES
- 24 LIGHTNING . . . STILL A TROUBLEMAKER • *O. A. Fitzgerald*
- 26 MAYAN MONARCH • *George N. Lamb*
- 28 NO PRISON RIOTS HERE • *Larry Burton*
- 30 SCIENCE AND MYTHOLOGY MANAGE A FOREST • *Irving Petite*
- 32 AFA'S ANNUAL MEETING PROGRAM
- 34 OUR EVOLVING NATIONAL WATER POLICY • *David G. Temple*

Cover • *Photograph of East Corinth, Vermont, courtesy of Vermont Life, an outstanding publication of the Green Mountain State.*



The AFA

The American Forestry Association, publishers of *American Forests*, is a national organization—independent and non-political in character—for the advancement of intelligent management and use of forests and related resources of soil, water, wildlife and outdoor recreation. Its purpose is to create an enlightened public appreciation of these resources and the part they play in the social and economic life of the nation. Created in 1875, it is the oldest national forest conservation organization in America.

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Forest Forum

Foresters for the Future

EDITOR:

I read with interest the editorial in the July issue of AMERICAN FORESTS "Let's Fill Up the Forestry Schools." I believe that every statement made is true.

For the past year and a half I have talked with many people regarding the make-up of printed matter that comes to the attention of high school boys and that advertises forestry. In my opinion, much of this literature creates a negative reaction to forestry as a profession. I have appeared on several career day programs in Alabama high schools. On numerous occasions I have had students tell me that pictures of forest fires, fire flaps, tree planting, and lookout towers have no appeal to a high school boy. This thinking may be behind the reason why more boys do not enter forestry schools.

My suggestion to those with whom I have talked is that we glamorize our profession such as is being done by schools of engineering and the military and feature more of the technical and scientific work done by foresters. Scientific instruments, modern methods of communication and the like could be featured in place of the fire plow, dibble, and fire flap.

The field of wood products and utilization gets about one tenth the coverage in our literature to high schools that is given to forest management. This in my opinion needs to be changed. Let's put scientific forestry on the cover of all our magazines and literature and minimize that part of our advertising that is failing to sell young men on forestry as a career. We can well learn a lesson from advertising in the field of engineering. Most popular magazines carry full page ads on the need for engineers; but none of them advertise ditch digging, pole climbing or sewer maintenance in the hopes that they will attract the cream of the crop to engineering.

If each school of forestry in its own state could obtain up to 10% of the students entering schools of engineering by promoting the idea that wood engineering is just as important, I believe we would get a better quality of student (one who could pass algebra, trigonometry, English and chemistry). Boys entering schools of forestry today rate exceedingly high on outdoor interest. This is essential but does not take the place of competence in science, mathematics, and English.

Finally let me say that if we advertise glamor of scientific forestry in both management and utilization and do this on an organized basis with wide coverage in all schools, I believe the "filling up" process will not be the problem that it is today.

W. B. DeVall, Head
Department of Forestry
Alabama Polytechnic Institute
Auburn, Alabama

EDITOR:

Your editorials in AMERICAN FORESTS have been an inspiration to me but never did I think one of them might help solve a personal problem. My son, a graduate of the Morgan Park Military Academy, has just finished his freshman year at the University of Illinois after putting in four years in the Navy. He is interested in agriculture but as a result of summers spent in my cabin in the upper peninsula of Michigan, I believe he is also interested in forestry. Who could he talk to with profit as regards the subject you cover in your editorial "Let's Fill Up the Forestry Schools" and where could he obtain the necessary training?

Albert C. Carlson, D.D.S.
Lombard, Illinois

EDITOR:

I am a student who has just graduated from high school and have long been interested in forestry as a profession. Previously, however, I had been somewhat confused about employment opportunities in this field as I have heard many conflicting opinions. Therefore, I sincerely thank you for the valuable information supplied by your July editorial "Let's Fill Up the Forestry Schools" as it has shown me that there are many excellent opportunities in this field.

Ernest A. Polz
701 N. Wolf Road
Hillside, Illinois

(Editor's Note—Henry Clepper, of the Society of American Foresters, suggests that Mr. Carlson and his son might profit from a talk with Dr. Nelson Spaeth, of the Department of Forestry at the University of Illinois. This department offers a fine pre-forestry course. For the benefit of both Mr. Carlson and Mr. Polz, the University of Michigan, Michigan State and Purdue all offer fine accredited forestry courses.)

EDITOR:

Your editorial in the July issue of AMERICAN FORESTS prompts me to write this letter of inquiry as my son, Donald W. Hastings, is planning a career in forestry. He will be a junior in Davis High School this fall and we are quite interested in opportunities in this field. Would you be so helpful as to suggest some accredited undergraduate schools of forestry or persons whom we might contact for more pertinent information relating to college curricula?

Mrs. Eunice R. Miles
655 Lafayette Avenue
Mount Vernon, New York

(Editor's Note—New York State has a fine forestry school at Syracuse. Why don't you and your son take a little trip up there and call on Dean Hardy L.

Shirley and some of the members of his staff. You will find Dean Shirley at the College of Forestry, State University of New York, Syracuse—Tel. 76-3151. They are all very cordial folks.)

EDITOR:

What qualities should a good forester have and what forestry school do you like best of all?

Robert Jones, Jr.
Bethesda 14, Maryland

(Editor's Note—A forester should be healthy in mind and body. In his book "Breaking New Ground," Gifford Pinchot, first chief of the Forest Service, stressed that character and courage were even more important than brains. By which he meant that he had seen foresters with these attributes forge ahead of people who merely were smart. Mr. Pinchot's book, which you might like to read, is also a vibrant testament to the fact that foresters should have adventuresome spirits—he imbued with a curiosity that encourages them to explore new ideas and new ways of doing things. We haven't visited all the forestry schools but all of them are good. Perhaps it is because it is far away, but one that impressed us particularly was the one at Oregon State College at Corvallis, Oregon. Some forestry schools seem to be tucked off into corners but those Fernhoppers, as the undergraduates call themselves, don't take a back seat to anybody. When they go rolling through the campus in their big trucks on the way to their 11,000 acre forest—right on the campus—people sit up and take notice. They have a lot of zip out there and Dean W. F. McCulloch believes in training men as well as foresters.)

EDITOR:

Your editorial of July spoke of the need to recruit more forestry students. I agree with you wholeheartedly. You should reach more high school students with the possibilities forestry offers them and make it easy for them to make further inquiries. Many professions are doing that today. I myself would like to know if there is any worthwhile forestry or other conservation job for me, a girl, to aim at after I graduate from high school.

Laura H. Berkeley
36 West 11th Street
New York 11, N.Y.

(Editor's Note—There are good opportunities in forestry I & E (Information and Education) work for bright, alert young women. Some women foresters have also done outstanding work in forest research, a realm of endeavor that is just now beginning to come into its own. In fact, the growing of trees as a crop and the management of all our renewable resources is just now beginning to come into its own and the sky, as we see it, is the limit.)

EDITOR:

In the July, 1956 issue of the magazine, I read the editorial "Let's Fill Up the Forestry Schools." As a teenager and a subscriber to *American Forests*, I was so very happy to read what was written.

Though I am not going into forestry, a good many of the kids in high school do not realize the potential. Seems that you are on the right path in your approach. It is important that we carry on the good traditions of the past in order to preserve the heritage of the land.

William Steiger
State Teenage Chairman
The March of Dimes
Oshkosh, Wisconsin

Ohio's Strip Mine Law

EDITOR:

For your information, the article in the June 1956 issue of *AMERICAN FORESTS* entitled "Lausche of Ohio" by Howard Thompson contains some inaccurate statements.

The first Ohio strip mine reclamation law was passed in 1947 under the Republican administration of Governor Thomas J. Herbert. The strip mine operators of Ohio had been carrying on voluntary reclamation efforts since 1941, and had developed this into a full-scale voluntary program in 1945 with the formation of the Ohio Reclamation Association.

Amendments were made in the original law in 1949, during the administration of Governor Lausche, with the cooperation of the strip mine operators. During the 1953 legislative session, still under Lausche's term of office, the administration of the strip mine law was severely criticized by the legislative committees. The 1955 legislature, under Lausche's continuing reign as Governor, again criticized the administration of the law and made amendements in it seeking to correct the situation.

Larry Cook
Executive Vice President
Ohio Reclamation Association
Cadiz, Ohio

"10 Danger Spots"

EDITOR:

I was very impressed with the interesting article, "10 Danger Spots In Conservation," which appeared in the July 1956 issue. I feel that a thorough study of this article would be of benefit to the students in the Menninger School of Psychiatry. May I have your permission to mimeograph this article for distribution to the fellows and faculty of our school?

Karl A. Menninger, M.D.
The Menninger Foundation
Topeka, Kansas

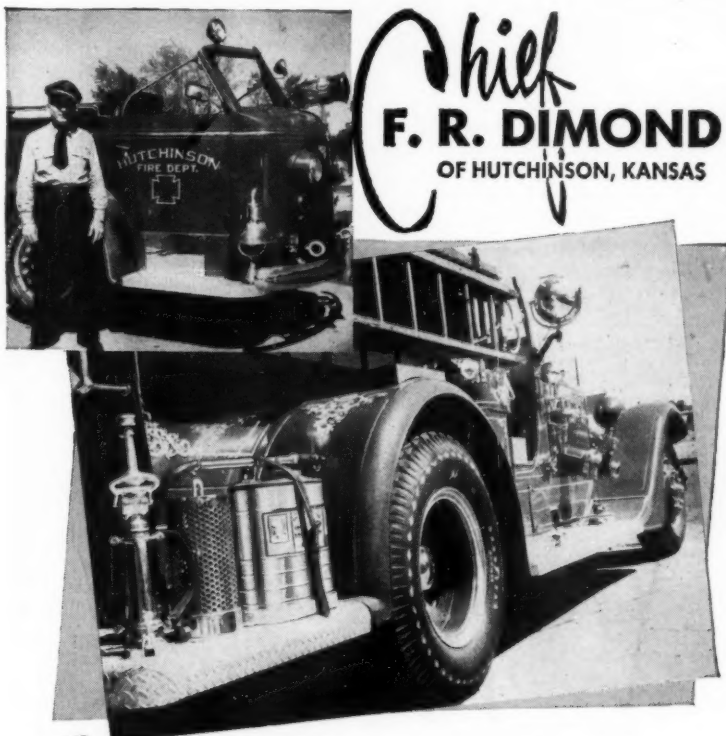
(Editor's Note—Permission granted—and we would be interested in the school's considered findings.)

New Secretary

EDITOR:

Before too much time slips away, I want to let you know that I was pleased with your article about me in *AMERICAN FORESTS*. I thoroughly enjoyed meeting you again and wish to thank both you and Mr. Hornaday for your friendly spirit of cooperation.

Fred A. Seaton
Secretary of the Interior
Washington, D.C.



Says: We like INDIAN FIRE PUMPS

because they are carried on the back leaving the men's hands free for climbing ladders, etc. We use them for all Class A fires. They are easy to get off the truck and on to the back of the men using them."

No. 90 SLIDING PUMP TYPE



INDIAN
FIRE
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proved by
UNDER-
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TORIES

For all Class A fires and many Class B fires. Fire Chiefs say INDIANS are "worth their weight in gold."

No. 80 LEVER TYPE PUMP and Handle



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Toronto, Ont., Canada



Dr. Reuben G. Gustavson

GUSTAVSON To Address Annual Meeting Banquet

REUBEN G. Gustavson, president and director of Resources for the Future, Inc., last month accepted an invitation from The American Forestry Association to address the 81st annual meeting of the association October 1-4 at LaPlata, Maryland. Dr. Gustavson will speak at the annual banquet Tuesday evening at the National Guard Armory in LaPlata. Five recipients of this year's Distinguished Service Awards in Conservation will be honored at this affair and all have announced their intentions to attend.

Resources for the Future was organized in 1952 by The Ford Foundation as a non-profit corporation "to improve the development, conservation, and use of natural resources, primarily in the United States, through programs of research and education." Some of its programs are carried on by a central staff of experts, some by grants to other institutions. To head up the new organization, The Ford Foundation drafted Dr. Gustavson, formerly president of the University of Nebraska. In previous appearances before forestry groups, he has evinced considerable interest in genetics research.

This year's meeting will salute the 50th Anniversary of Maryland's Department of Forests and Parks and will include a special issue of *American Forests* magazine dedicated to the Old Line State. The key theme

Chapel Point, located at confluence of Potomac and Port Tobacco Rivers

New National Guard Armory in LaPlata—where indoor meeting of AFA convention will be held



of the meeting will be the small woodlands of the nation and how to improve their productivity. According to Fred E. Hornaday, executive vice president of AFA, this year's meeting promises to be the largest in history. "Ordinarily we do not have a heavy registration until several weeks before a meeting. But this year we had over 200 solid registrations six weeks before the event and registrations continue to come in at the rate of 25 a day," Mr. Hornaday said. "This points to one of the largest, if not the largest, annual meeting we have ever held."

"The fact that the Association of State Foresters is also holding its annual meeting in conjunction with AFA will also build up a big turnout," Mr. Hornaday said. Delegates to the convention this year will be housed in a chain of attractive motels in the vicinity of LaPlata, in the heart of Charles County. So far as AFA has been able to determine, this will be the first "national motel convention" in history.

Meanwhile, Clint Davis, Chief, Information and Education Division, Forest Service, chairman of the indoor program committee, announced last month that the indoor meeting on October 1 had been completed. This program had been carefully planned to cut across every segment of activity as regards small woodland management, and it is the committee's hope that participants will "get down to cases" on this vital problem.

As shown by the complete program presented on pages 32 and 33, speakers will include Gov. Theodore R. McKeldin, of Maryland; Dr. Wilson Compton, vice president of AFA and president of the Council for Financial Aid to Education; Kenneth Pomeroy, chief forester of AFA; Richard E. McArdle, chief forester of the Forest Service, Department of Agriculture; Maurice K. Goddard, secretary, Pennsylvania Department of Forests and Waters; John L. Gray, extension forester, Raleigh, North Carolina; R. Vance Miles, Jr., forestry manager, Gulf States Paper Corporation, Tuscaloosa, Alabama; Warren T. White, assistant vice president, Seaboard Air Line Railroad; J. V. Whitfield, president, Forest Farmers Association Cooperative; A. N. Liming, district extension forester, Versailles, Indiana; David C. Barton, farm forester, Vermont Department of Forests and Parks; Harry M. Roller, Jr., conservation forester, International Paper Company, Mobile, Alabama; William P. House, consulting forester, Chesham, New Hampshire; a talk by "the man who owns one" to be named by Maryland foresters; O. A. Alderman, chief, Division of Forestry, Ohio; Dr. M. D. Mobley, executive director, American Vocational Association; Clayton M. Hoff, vice president, Brandywine Valley Association; John H. Wetzel, chief, Watershed Planning Branch, Soil Conservation Service; and Harris W.

Soule, director, NE Area, Commodity Stabilization Service.

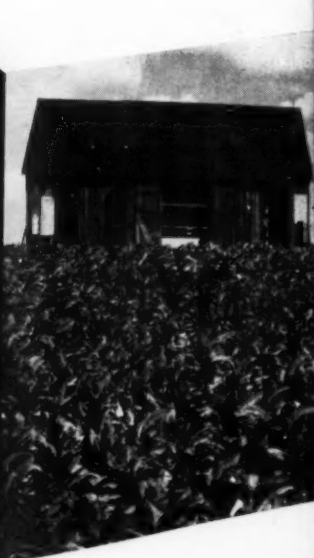
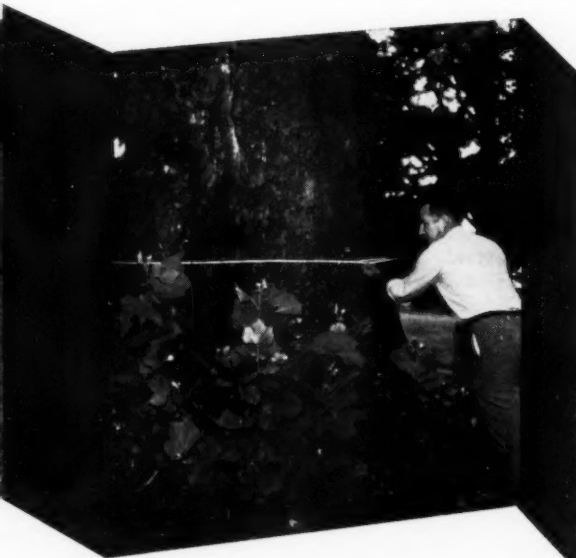
The all-day indoor session on Monday will be followed that evening by an oyster roast at Chapel Point, the confluence of the Port Tobacco and Potomac Rivers. On Tuesday the guests will tour Cedarville State Forest. Here they will see woodland management practices and research programs as carried on by state foresters, an equipment display and an exhibit of Maryland forest products. The annual banquet will be Tuesday evening.

On Wednesday, the guests will visit woodlands owned and managed by the Glatfelter Paper Company. In the afternoon, a cavalcade will go to historic Annapolis where a dress parade by the midshipmen of the United States Naval Academy will be a star attraction. A tour of historic Charles County homes will be a feature of the meeting on Thursday. Two of these, La Grange and Rose Hill, were formerly the homes of two physicians who attended General George Washington. LaGrange, owned today by Mr. and Mrs. James W. Wells, was named in honor of Lafayette whose home in France bore that name. The home was built by Dr. James Craik, Surgeon General of the Continental Army, about 1763. It is noted for its ends and wing of brick, its huge double chimneys, fluted pilasters, its gable windows, deeply recessed interior doors, and other features.

Chapel Point and Potomac River as seen from St. Ignatius Church, built in 1798

Giant sycamore at Chapel Point is 4 feet 11½ inches in circumference

In southern Maryland tobacco is main crop. Much is shipped to Switzerland





Committee members (l. to r.) Luther Hester, Nutrilite Foundation, Carl D. Shoemaker, Conservation News Service, Lloyd Partain, Curtis Publishing Co., Otto J. Wolff, sheep rancher, DeWitt Nelson, Calif. Dept. of Natural Resources, Samuel T. Dana, chief of study staff, Jay H. Price, forester, George L. Drake, consulting forester, J. Walter Myers, Jr., Forest Farmers Association, Harold G. Wilm, College of Forestry, Syracuse, New York

LANDOWNERSHIP COMMITTEE

THE American Forestry Association's Committee on Forest Landownership appointed to conduct a study on the various facets of federal, state and privately-owned wild lands, such as forests, grazing and recreational, met at San Francisco July 25-27, and has filed its report with the association.

As originally contemplated the committee was to conduct its studies in three different geographic and landownership pattern states. California, Michigan and North Carolina were the typical states selected.

In order to initiate the first study, the Nutrilite Foundation of California made a grant to begin the study in that state.

California has an area of slightly more than 104 million acres and a population of 12,085,000.

It has 18 national forests, several national parks, 53 state parks and 19 historical monuments. Twenty-five million acres are desert land. Approximately 85 percent of its entire area is undeveloped—that is, not farmed or devoted to cities and towns. The landownership pattern in this undeveloped area consists of forest, grazing and other federal or publicly owned lands, state and rec-

By **CARL D. SHOEMAKER**
Editor, Conservation News Service

reational lands, and small and large privately-owned timber and grazing areas. Within its forests it has the usual fire, insect and disease problems. California is not a producer of enough water to irrigate its land and satisfy the needs of its citizens. It is a receiver of water instead of a giver. This inevitably produces interstate and national implications.

Many federal agencies own large blocks of California acreage. The largest of these are the Forest Service, the Department of Defense, Bureaus of Indian Affairs, Land Management and Reclamation, the Fish and Wildlife Service and the National Park Service. All of this public land is no longer subject to taxation. The loss in revenue for taxation purposes is stupendous and as the County Supervisors Association of California stated in 1953, "becomes an additional tax burden to the property owners throughout the state even though the federal acquisitions served a national interest. The inequitable tax burden thereby thrust upon particular taxpayers should be recognized as the prime responsi-

bility of all who pay taxes to the federal government."

Military withdrawals are critical conflicts. They withdraw from the public domain vast areas for experimental activities such as gunnery ranges, bombing, aircraft maneuvering and other activities vital to maintaining our national defense training operations.

The tidal wave of tourists coming to California needs more places to stay, pitch a tent or park a trailer. Hunters and fishermen are increasing by leaps and bounds. Other forms of recreation are expanding at an accelerated rate. A state assemblyman stated, "We have to have more land for more people. The only way to get it is from the Federal government."

The question was raised whether the small timber owner can produce his product as economically and with less waste than the large operator. How much land is now required by citizens to make a living? These and many other questions were raised during the three days' consideration of the problem. On the second day the committee invited in representatives from the state
(Turn to Page 52)

OUTLINE FOR STUDY OF LANDOWNERSHIP IN CALIFORNIA

1. PURPOSE:

To lay a sound foundation for intensive studies of landownership in California by identifying major problems and suggesting approaches to their solution, with special reference to timber, range, watershed, and recreational uses.

The project will logically pave the way for more thorough subsequent investigations of the subject by the state, and will serve as a guide to the direction that such investigations should take.

It is an integral part of the program of The American Forestry Association to stimulate both national and state-by-state studies of the landownership situation. State studies are essential to assure adequate consideration of local conditions and problems, while a national study is essential to assure adequate consideration of interstate relations in which regional and national interests are involved. The association hopes to make pilot studies in three states with widely varying forest conditions and ownership patterns. The California project is the first of these studies.

2. SIGNIFICANCE:

Ownership of the timber, range, watershed and recreation lands of the United States is one of the most crucial factors in determining the effectiveness of their contribution to the economic and social well-being of the state and the nation. The character of the ownership affects such vital matters as purpose, stability and intensity of land management; feasibility of multiple-use management; establishment and stability of wood-using and other industries; community support in the form of taxes or contributions in lieu of taxes.

The land-disposal and later the land-reservation and land-acquisition policies of both the federal and state governments have led to an unplanned and often illogical pattern of ownership. The situation is complicated by the wide variety of agen-

cies to which administration of the publicly owned lands has been assigned, and by the division of ownership between large and small private owners. What percentages and what kinds of timber, range, watershed and recreational lands in the various states should be in federal, state, community, corporate, farm and other ownership, and what pattern these ownerships should form are examples of questions to which no clear answers are at present available. Study and improvement of the land ownership pattern are essential to assure the sound development of the economy on a permanent basis.

The urgency of the study is emphasized by the population explosion that is occurring in the United States in general and in California in particular. The rate at which the population of the state has been growing, and will undoubtedly continue to grow, is placing a steadily increasing strain on its natural resources, with resulting competition for their allocation to different uses, which has an important bearing on ownership problems.

3. PROCEDURE:

Office and field studies and interviews, including analysis of previous studies and reports on the subject, to cover the following ground:

- a. Preparation of a brief history of landownership and management by federal agencies such as Departments of Agriculture, Interior and Defense; state agencies such as Departments of Natural Resources, Fish and Game, and Lands; local governmental agencies; quasi-public agencies such as utilities; and private agencies—large and small, industrial and others. Such history will include the influence of state and federal land laws.
- b. Analysis of present ownership patterns, with special reference to recent and prospective changes and trends in those patterns and reasons therefor.
- c. Analysis of the relative effectiveness of different types and patterns of landownership in attaining such objectives as:
 - (1) Sustained timber production.
 - (2) Optimum water yield.
 - (3) Ample opportunities for recreation.
 - (4) Sustained livestock production.
 - (5) Orderly exploration and development of mineral resources.
 - (6) Community stability, including the tax base and contribution in lieu of taxes.
- d. Broad survey of management practices by different classes and types of ownership.
- e. Analysis of federal and state policies on matters such as forest protection, water and watershed development, grants-in-aid, land uses and management, and taxation, that have or may have an influence on the ownership pattern. This analysis will include consideration of the interstate aspects of the management of California's natural resources, and of the responsibilities of management of their lands.
- f. Summarization of results of the study, with emphasis on major problems of landownership in California and on suggested courses of remedial action.
- g. Preparation of a proposed working plan for a follow-up definitive study by the state. Such a plan will help to steer subsequent investigations of the subject along the most productive lines. It should be emphasized that this "definitive" study will not be a final study—we are living in a dynamic era, in which a rapidly growing population and expanding economy will necessitate continuing study of the ownership and management of the natural resources on which that economy depends.



Minnesota's

Elwood R. Maunder, director of the Forest History Foundation, peruses collection of *American Forests*

Forest History Foundation

By MARCIA MORRISON

A RARE collection of thirty-six bound volumes of *American Forests* and its predecessor publications, dating back to 1898, have been presented to the library of the Forest History Foundation, Inc., St. Paul, Minnesota, by The American Forestry Association, Washington, D. C.

In announcing receipt of the gift, Elwood R. Maunder, director of the foundation, described it as "one of the most important secondary sources of forest history received by the foundation. AFA's contribution fills a large gap in our collection."

Fred E. Hornaday, executive vice-president of The American Forestry Association, presented the volumes to the foundation. Included were various volumes of *The Forester* for

1898 and 1899, *Forestry and Irrigation* for 1907, *American Forestry* for 1910 through 1923, *American Forests and Forest Life* for 1924 through 1930, and *American Forests* for 1931 through 1952.

One of the foundation's purposes is to serve as a clearinghouse for books and periodicals of value to libraries interested in preserving forest history source materials. It is affiliated with more than 100 libraries in Canada and the United States to which it refers these publications.

The contents of the foundation's own library at its headquarters, 2706 West Seventh Blvd., St. Paul 16, Minnesota, are available on inter-library loan to scholars and writers in the two countries. Persons or organizations wishing to donate peri-

odicals or books for placement in libraries are requested to write the foundation.

Founded in 1946 and incorporated in 1955, the Forest History Foundation is a non-profit educational organization dedicated to collect, preserve and disseminate the history of the forests and forest-related groups in North America.

During the past four years the Forest History Foundation has grown from a special project of a single state historical society to an independent educational institution affiliated with more than 100 leading collecting and educational institutions in all parts of the United States and Canada. The size of its working professional staff has been doubled and its services to the public have quadrupled.

Washington Lookout



By ALBERT G. HALL

THE SECOND SESSION OF THE 84th CONGRESS which hurried to a sine die adjournment on July 27 in time to prepare for the presidential nominating conventions, produced some lasting effects upon the course of forestry in the United States. Chief among these was the passage of the Agricultural Act of 1956, including the features of the Soil Bank. The Soil Bank is a subsidy program. Under the forestry features of the act, the landowner will be paid for converting cropland to trees. The bill passed too late to be effective in 1956; and forest tree nursery capacity and the availability of tree seed, especially in the East, are not sufficient for it to have much effect in 1957.

IT IS ESTIMATED BY THE U. S. FOREST SERVICE that as much as five million acres of cropland may be planted to trees under the "conservation reserve" feature of the act. Federal share of the cost of the conversion will be about \$16 an acre, and annual payments or "land rental" to the owner will range from \$7 to \$13 an acre, averaging about \$10. Thus it can be expected that on a 15-year contract, it will cost the taxpayers up to \$200 or more an acre to take the cropland out of production and keep it in trees. During the contract period, the owner must follow sound forestry practices if he does any harvesting. After the contract period, (as the law now stands), he may clear the land or continue to practice forestry, at will.

FEDERAL FORESTRY RECEIVED RECORD-BREAKING APPROPRIATIONS. Funds voted for the U. S. Forest Service in the regular supply bill totaled \$143,472,150, an increase of \$12,213,084 over the actual appropriations for the previous fiscal year, and \$4,471,950 above the budget request. Supplemental appropriations for the fiscal year ending June 30, 1957, add \$500,000 for land acquisition within the Superior National Forest in Minnesota and \$50,000 for acquisition within the Cache National Forest in Utah. Forestry activities of the Bureau of Land Management, Department of the Interior, also received increased appropriations over the previous year: \$3,981,000 for regular forestry programs and \$4,500,000 for construction of timber access roads on O & C lands in Oregon, a little more than a \$1 million increase on each item. Tennessee Valley Authority's forest resource development program continues at about the same level as in the past with \$520,000 allotted for it. The Department of Agriculture's flood prevention program received a \$2,000,000 increase to \$12,000,000 for the current fiscal year; and its watershed protection program received a \$5,500,000 increase to \$17,500,000. Modest increases were given to forestry and range work, Bureau of Indian Affairs and to forestry and fire control, National Park Service.

ECONOMIC DEVELOPMENT OF SOME OF THE VAST TERRITORY OF ALASKA may eventually result from the passage of a bill to grant Alaska autonomy in the field of mental health. Among other things, the act grants one million acres of unappropriated and unreserved public domain to the territory. This land may be sold to help finance the mental health program. The grant is similar to those made in the past to the western states for school and other programs. The federal government owns in excess of 339,000,000 acres in Alaska.

ANOTHER INTERSTATE COMPACT FOR PROTECTION FROM FOREST FIRE came into existence in the closing days of the 84th Congress. The Middle Atlantic States Interstate Forest Fire Protection Compact includes Delaware, Maryland, New Jersey, Pennsylvania, Virginia and West Virginia. This is the fourth such compact to which Congress has given its consent and approval. The first was the Northeastern compact set up in 1949. Others are the Southern and the South Central. The four compacts now cover all the eastern and southeastern states, and permit joint planning and

(Turn to next page)

mobilization for forest fire control. The U. S. Forest Service assists in the planning phases and especially in the development of training plans and sessions for organization and action on large-scale or "bust" fires.

PRESERVATION OF FOREST MANAGEMENT ON THE LANDS OF THE MENOMINEE INDIANS has been aided by the passage of a bill requiring that plans for the relinquishment of federal control over the property of the Menominees include provision for "production of the forest on a sustained yield basis, and for the protection of the water, soil, fish and wildlife." Similar action has not been taken in regard to the Klamath Reservation; but it is expected that regardless of the outcome of the November elections, the plan for the Klamath will be revised by the new Congress.

THE MULTI-BILLION DOLLAR HIGHWAY ACT under which the federal government will meet 90 per cent of the cost of a 41,000-mile interstate road system can be expected to increase the tourist pressure on public forest and park lands, which in turn will increase demands for further funding and developing of recreational areas. Thirteen bills seeking to provide for additional recreational facilities and for adequate maintenance of existing ones in the national forests failed of passage. Most of these had the unpopular "ear-marking" features proposing to utilize percentages of national forest receipts rather than direct appropriations. The Department of Agriculture is now engaged in a review of present and long-range recreation and wildlife needs in the national forests.

THE ROADLESS AREA OF THE SUPERIOR NATIONAL FOREST HAS BEEN INCREASED IN SIZE by the addition of 15,000 acres to the 24,650 acres in process of acquisition. Authorization of funds for the purchase of the land for rounding out the "water wilderness" has also been increased from \$500,000 to \$2,500,000.

EXTENSION OF THE WATER POLLUTION CONTROL ACT to June 30, 1961, also provides for federal subsidies in the form of grants totalling \$50 million annually to states, municipalities and other public agencies for the planning and construction of treatment works.

AMENDMENT OF THE SMALL WATERSHED ACT - PUBLIC LAW 566 of the 83rd Congress developed into a compromise providing increased federal participation in what was initially conceived as an act to permit local groups to develop small watersheds with a minimum of federal assistance. Size limit of the watershed structures permitted under the act has been increased from 2,500 acre-feet to 25,000 acre-feet, with those less than 4,000 acre-feet to be reviewed by the Senate and House Committees on Agriculture; and those of more than 4,000 acre-feet to be reviewed by the Committees on Public Works. Impoundments smaller than 2,500 acre-feet need not be presented to Congress for approval. Under the amended act, the burden of flood prevention costs is placed on the federal government, and non-agricultural purposes may be included in the objects of the dams.

AMONG THE BILLS WHICH FAILED OF PASSAGE, but which probably will appear early in the 85th Congress were, in addition to the recreation measures mentioned above: an effort to limit withdrawals of public lands for defense purposes to 5,000 acres unless prior approval had been given by the Congress. Representative Engle of California, author of the measure and chairman of the House Committee on Interior and Insular Affairs, has requested the Department of the Interior to withhold approval of large defense withdrawals, except in emergencies until the new Congress has an opportunity to act on a limiting bill.

HOW SHALL THE FEDERAL-STATE FOREST FIRE CONTROL PROGRAM BE CONTINUED? Should federal responsibility decrease or increase? Will the states pick up the check if the federal proportion of cost-sharing is decreased? Should the private landowner carry the full burden of protection in view of increasing public use of private lands? Who should foot the bill on the protection of watershed lands — the local people or the ultimate water users, a state or several states removed from the water sources? These and many similar questions were on the minds of a steering group assembled by the U. S. Forest Service near Pontiac, Mich., in early August. Purpose of the meeting was to draw guide lines for a study to be made on contract by a management consulting firm to determine the costs of adequate protection, how it should be financed, and the proper distribution of the costs of protection. The steering group was selected by the Forest Service from among landowners and users of the forests. Of eleven invitees, nine agreed to serve, and eight attended the two-day meeting, despite the vacation season. Interest appears to be real! (For an additional comment on the Pontiac meeting see page 42.)

Editorial

Frisking in the Fields?

Last month the executive committee of The American Forestry Association took a strong stand opposing a bill to create a National Wilderness Preservation System (S. 4013) as introduced by Senator Humphrey and others. Fundamental objection is that the bill would tend to "develop a legislative history in a direction of a single and exclusive use on a perpetual basis" on the national forests inimical to the best interests of the multiple use program. In stating its position, AFA also invited comment from proponents of the bill, doing so in the belief that the burden of proof must rest on those who would alter a program that has been eminently successful in the past. One of the first comments came from Peter E. Terzick, editor, *The Carpenter*, published by the United Brotherhood of Carpenters and Joiners of America. Mr. Terzick, a former honorary vice president of AFA, also played a constructive role at the second Higgins Lake Conference of the association. He writes:

"Your action greatly disturbs me . . . I appreciate the sincerity of the motives and the profundity of the reasoning which led to this action; but I am afraid that it puts the cart before the horse, nonetheless. First and foremost, let me say that I am a firm believer in the multiple use theory. As a participant at Higgins Lake, I felt the multiple use statement developed by the committee was the most important thing to come out of the conference. I still feel the same way.

"However, as a matter of practicality, I am convinced that opposing the Humphrey Bill is a mistake. I want to see these lands administered under multiple use principles as ardently as anyone else, but I do think that the first and most important thing is to get the wilderness areas locked up. Then, as social and economic needs develop, the areas can be opened up to such activities as prudence and wisdom dictate. There will be nothing immutable or irrevocable about the Humphrey Bill if it is passed. Future Congresses can amend it as conditions warrant, but the important thing is that it will get the lands under complete protection *NOW*.

"Therein, I think, lies my whole philosophy regarding multiple use. To me, the logical approach is to get the lands locked up as wilderness areas immediately. If this is not done now, years may elapse before appropriate legislation is passed. In the meantime, commercial pressures constantly will be chipping away at the areas. Every acre withdrawn from wilderness status is lost forever. If some of us were omnipotent and able to look into the future, it might be possible for us to write legislation covering all possible exigencies, but none of us falls in that category. So I feel that the safest approach is to give wilderness status top priority. Then, as new needs and wants develop, legislation could make the lands subject to additional uses. If this rule

is followed, wilderness areas will remain wilderness until such time as there is overwhelming pressure, based on legitimate need, for opening the lands to other uses. This seems to me to be a logical approach for any true conservationist.

"We might as well face the fact that rising population pressures and dwindling natural resources foredoom most of our wilderness areas to eventual extinction. However, I think the process should be as gradual a one as possible; that every proposal to invading the wilderness should stem from vital necessity, without possible alternative, before concessions are made. Someone recently predicted that in 300 years our whole nation will be as thickly populated as New York City now is, if the population trend of the past half century continues. I think that tells the story.

"I admit that resources such as ripe timber and unused water are perishable resources. Once a tree begins decaying from old age, or water has passed downstream, both are lost forever. The nation can ill afford to permit such resources to dissipate themselves, nor should it. It seems to me, conservationists must recognize that fact. A bill embodying this approach would be closer to ideal. However, ideal things are few and far between in this sorry old world. There is validity, I admit, to the board's contention that a measure setting up a single use precedent is treading on dangerous ground. But what ought not to be overlooked is the fact that the direction in which the measure leans too far is over-rigid conservation.

"Basically, what it boils down to is this: Is accepting a bill that goes too far in over-conservation, right now, better than waiting for God knows how long for Congress to pass a wiser one—a laborious and peril-fraught prospect at best? I heartily favor the former course. I feel those of us who have some appreciation of nature untrammelled should constitute a rear guard echelon against the inexorable advance of commercialization. Inch by inch and acre by acre we will be pushed back as the decades roll by. But every stand must be a staunch one, and each retreat based on inevitability.

"My father's recipe for rabbit stew started out 'First, catch the rabbit. . .' In the case of our wilderness areas I feel that his recipe has real application. First lock up the wilderness, then worry about other ingredients. I cannot help feeling that AFA's action is gathering the condiments while the rabbit is still frisking in the fields."

American Forests will have more to add on this subject in future issues. Meanwhile let's get all the arguments pro and con out on the table and then thresh the matter out in terms of what is best for our renewable resources future. This is a matter of basic importance.

Tree farming helps relieve the tensions of a hazardous occupation

A Test Pilot Takes to



Aerial view of a portion of the alder stand on Michael's land

Michael, a test pilot, engineer and tree farmer, in cockpit of Boeing B-29 bomber

This tree is pruned to show how Christmas trees are grown. The top portion can be harvested when it reaches marketable size



esto Tree Farming

By ROBERT HERTZLER

cone of Mount Rainier. The virgin growth of Douglasfir that once covered the tract was logged off in 1910-11. Between 1911 and 1926, the area was raked four times by slash and brush fires. But in the 30 years since the last blaze, natural reforestation has healed the burn scars, except for one or two charred snags which still reach above the tops of the growing trees. These snags, which would constitute a fire hazard in more inaccessible forests, are retained by Michael to remind visitors to his tree farm of the price we have paid in the past for forest fires.

Michael's immature forest is made up of two different types of trees. Roughly half of the 75 acres is covered with 30-year-old Douglasfir, many of which now are 12 inches in diameter and 50 feet high. He estimates that the major part of his fir stand will be ready for harvest "around the year 2000." Michael, who would be approaching his 90th birthday at the time his trees reach maturity, expects to participate in the logging operation "in an advisory capacity only."

A low ridge formed by the outwash from one of the ice sheets which covered the Puget Sound area thousands of years ago bisects the property. The land on which the firs grow is on one side of the ridge in gravelly, well-drained soil. On the other side of the ridge, the soil is more loamy and supports a thick stand of red alder. Once regarded as a worthless "weed tree" by lumbermen, alder now is prized as the Pacific Northwest's most important hardwood. Within recent years it has become the basis for a growing furniture industry. Also, it is used increasingly for making wood pulp by the soda or sulfite process.

Interspersed in the alder stand are black cottonwoods, another one-time weed tree which now is valuable as the best wood for making the familiar upholstery and packing material, excelsior. The alder will be ready for "clear cutting," or total harvesting in 10 to 15 years. The black cottonwoods can be logged selectively in five to ten years.

Michael's tree farming activities consist of thinning and pruning the

fir stand and thinning the fast-growing alder. For his family's recreational use he has established an outdoor camping area.

Trails and fire access roads have been cleared to all parts of the acreage. The trails, in addition to assuring swift suppression in case of fire, also permit large groups of school children from the Seattle metropolitan area to use the tract as a "living textbook" on tree farming once each year.

The present well-managed and

(Top) girdling tool consists of stout handle with a girdling blade. (Below) Girdling is the most economical way to thin a stand of fast-growing red alder

THE height a tree can grow in 30 years and the distance an eight-jet aircraft can fly in 30 minutes are familiar subjects to Marvin Michael.

A rangy, transplanted plainsman from Kansas now living in Seattle, Michael thoroughly enjoys the extreme contrast between his work for Boeing Airplane Company and his weekend relaxation as a tree farmer. As a Boeing test pilot, Michael has spent more than 3,000 hours jockeying prototype airplanes through shakedown and research flights. Currently he is supervising preparation of the operating manual which will be a "bible" for Air Force pilots who fly the B-52 long-range Stratofortresses now rolling off Boeing assembly lines in Seattle and Wichita.

To accomplish the remarkable switch from "jet-time" to "tree-time" Michael has only to climb into his station wagon and drive 25 miles from his home to a 75-acre tract of timber located just beyond the limits of Seattle's suburbia.

Michael's tree farm is on a gentle south slope facing the towering



purposeful appearance of Michael's tree farm is a far cry from the brush choked and neglected look it had in 1946 when he acquired the site. In ten years, the land has been transformed from a piece of dormant real estate on which the county could not even collect taxes, to a first-class recreational area, an investment of increasing value, a property which helps support schools, roads and local government through regular payment of taxes, an educational facility, a haven for wildlife, and, most important, a place where trees can be protected, harvested and grown again to provide timber for the future.

In 1946, Michael as a graduate aeronautical engineer and test pilot knew nothing about tree farming. For that matter, few people outside the lumber industry in the Pacific Northwest did. Tree farms were regarded at that time as of interest only to the big timber companies which owned vast cut-over acreages.

However, Michael was interested in acquiring what local real estate salesmen scornfully called a "stump ranch." The term referred to the apparent ability of the hilltop land around Seattle to support little more than massive fir and cedar stumps, usually fire blackened, which dated back 40 or 50 years.

Michael drew up a list of "Purposes and Objectives" to convince himself and his wife, Laura, that the benefits to be derived from stump

Properly pruned, Michael uses this fir as example for his volunteer pruners. Firs are pruned to one-third of height



Mike Michael, 10, demonstrates pruning method. He climbs to the height to which limbs are to be removed and prunes down to earth

ranching outweighed the strain such a purchase would place on the family budget.

At the top of the list under the heading "Seclusion," Michael wrote, "A spot for quiet relaxation where one can momentarily escape high-speed living." Michael, who with others in his profession, then was at the fag end of the greatest aircraft production drive in history, knew something of "high-speed" living.

The Michaels had moved to Seattle in 1940 from Wichita, Kansas, where Marvin first became associated with the aircraft industry in 1929 as an office boy to Earl Schaefer, then the sales manager of Stearman Aircraft Company, and now vice

president and general manager of the Wichita Division of Boeing Airplane Company.

Michael received his aeronautical engineering degree from the University of Michigan in 1936, and took an advanced degree in 1938. In the course of his studies he learned about flying the hard way—by making more than 800 solo flights in gliders.

Most of Michael's 3,000 test flying hours were logged in Seattle under accelerated wartime schedules in such aircraft as the B-17 Flying Fortress, the B-29 Superfort and the B-50. In the postwar era he flew the C-97 transport, the first Boeing Stratocruisers, the B-47 Stratojet pro-

tototypes and the KC-97 Flying Tanker which is used by the Strategic Air Command to refuel the B-47 in flight.

Michael is a strong family man, and during the war years he made use of his limited time for relaxation for such activities as camping. Because of travel restrictions, the family visited the sometimes crowded public campgrounds in the immediate vicinity of Seattle. Michael credits a noisy night in a camp on Snoqualmie Pass with a party of revelers on one side and the pop-popping of big trucks descending the steep grade on the other with tipping the scales heavily in favor of eventual acquisition of a private camping area.

The year he bought the first 65-acres of "seclusion," Michael's family consisted of his wife and two daughters; Carol and Gwenn, now 15 and 12 respectively. Mike, their first son is 10, and their youngest son, Larry, is 1 year old.

Second on Michael's 1945 list was "Physical Health," with the objective spelled out as "a place with room for the children to run and play . . . where adults can enjoy outdoor work and recreation . . . where both children and adults can avoid the smoke, noise and traffic of the city."

This objective, Michael reports, has been met in full, with the tree farm having provided over the years an ideal play area with plenty of "growing room" for his three oldest children, plus perhaps a score of their neighborhood friends.

For himself, Michael says he has found his tree farm to be the right prescription for relief of the tensions associated with activities like test flying which make such great demands on the nervous system.

"You can push an airplane and yourself to the limit of endurance, but you can't hurry a tree," Michael observes. "When you're working with trees you realize that it's foolish to try to accelerate the slow timetable they follow through the seasons. They enforce relaxation on you."

The third objective in Michael's "stump ranch manifesto" was "financial security." Possible sources of extra income to be derived from landownership were listed as an orchard, a vegetable garden, a patch of blueberries or raspberries and facilities for raising various types of small livestock. Well down on the list were "raising Christmas trees" and "harvesting fuel wood."

From the long-range investment standpoint, Michael regarded land as a good hedge against inflation.

Once the Michaels had decided that the advantages outweighed the disadvantages, Michael set about investigating available plots of ground. The want ads in the Seattle newspapers listed acreages in reasonably-distant stump areas as starting around \$100.00 an acre. When Michael saw a listing at \$60.00 per acre, he investigated the general area carefully and found that an adjoining parcel of land was to be sold by the county for back taxes. Further research at the King County courthouse disclosed that other

tracts around Seattle soon were to be auctioned off in the first tax-title sale to be held since before World War II.

Michael selected three likely tracts, rented an airplane one weekend and flew an informal aerial survey. A ground check on foot confirmed what was apparent from the air; that is, the 65-acre parcel had the advantages of better accessibility, more level land and richer soil. The county required a minimum bid of \$10.00 per acre on the tract Michael wanted, so he entered a bid and, with foreboding, made plans to attend the public auction.

Of the more than 200 persons who attended the auction, only two besides Michael were interested in the 65-acre stump tract; and Michael, to his surprise and relief, won out over them with a bid of \$13.00 per acre. It should be said that it is doubtful that land located within a few minutes drive of the expanding Seattle metropolitan area will sell at such low prices again, but for acreage in the Cascade Mountain foothills within 40 miles of Seattle prices still range under the \$100.00-per-acre level.

Within two years after his initial purchase, Michael acquired two adjoining five-acre parcels from private parties and had to pay around \$60.00 per acre.

Michael's first project was to clear a campsite and put in trails for hiking. No effort was made to clear any part of the land for orchard or garden use.

As Michael explains it now, "The
(Turn to page 49)

Visiting youngsters review fire prevention rules on Michael's 75-acre tree farm before they embark on a pruning expedition

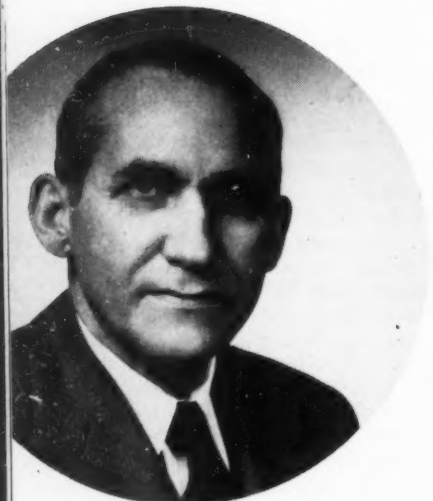


Pruners reward, lemonade and cookies, served from tailgate of Michael's station wagon



Training teenagers may be the solution
to Missouri's forest management problem

By WILDON E. ROBERTS



Dr. R. H. Westveld, head of Forestry Department, University of Mo.

MISSOURI foresters, weary of battling needless man-made fires that account for at least 90 per cent of the state's annual forest fire losses, are watching progress of a University-planned youth training program in the hope that it holds the key to their worst problems in the sphere of public education.

Behind the shocking Missouri record that each year racks up a total of more forest fires than occur in all of the Great Lakes states combined, are men with torches who "want to see the woods burn." It's a knotty problem of social behavior laced with generations of Ozark customs, or practices, based on the belief that it's good for the woods to burn.

Despite educational efforts of conservationists and a mounting tax burden to support state and federal services, each spring and fall finds fires breaking out like a rash and smoke palls hanging over the Ozark woodlands to mark the scene of destruction.

Each year finds from 6,000 to 8,000 "wildfires"—fires burning out of control—damaging as high as a million acres of woodland and hill pasture. As one conservationist put it, "the farmers are burning holes in their own pocketbooks." And, paradoxically, the situation is most critical

in counties where sub-standard agricultural economies make every dollar of available income count.

The problem remains so acute that scarcely a meeting of foresters or wildlife conservationists passes without some discussion of the incendiary fire problem. Agricultural and sports writers for the state's newspapers, weary of harping on the subject, sometimes doubt the effectiveness of any educational program.

Added to the serious fire problem are the usual forest management headaches of insect and disease attacks, uncontrolled grazing that damages young tree stands and the effects of three consecutive years of drought that exacted a heavy toll of valuable timber.

Despite these obstacles, state and federal forest protection agencies have made great progress in restoring forest lands which represent slightly more than one-third of the state's total land area. In 1899, Missouri produced 750 million board feet of lumber harvested from its virgin pine and oak stands. By 1938 production had dropped to a low of 59 million board feet.

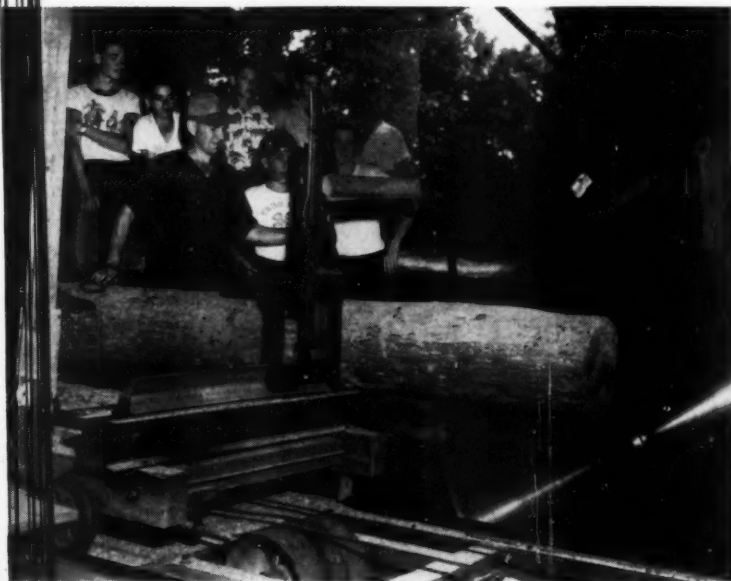
In 1933, the first lands were acquired for federal forests; and in 1938 the first organized state fire protection districts were authorized under the State Conservation Commission. It was then that the pen-

MISSOURI'S Forestry Camps



A logging demonstration sparks interest of boys. Here, student uses a one-man chain saw

John R. Hardy demonstrates handling mill carriage control at University's sawmill. The boys learn good practices and check results of their log scaling problems



dulum began to swing back and production climbed steadily to approximately 500 million board feet in recent years. Yet foresters agree the annual timber harvest can be five times today's production if the land is properly managed and the fire problem is overcome.

With hardly 20 years of trial and error behind them, foresters have come to the conclusion that their one brightest hope for the future lies with a new generation of Ozark farmers growing up under the influence of 4-H club and vocational agriculture training. Two years ago, Dr. R. H. Westveld, head of the Forestry Department of the University of Missouri's College of Agriculture, moved to put into practice a "pet" project that had been cussed and discussed in shirt-sleeve sessions of his faculty associates for a number of years.

Dr. Westveld's plan, which met with the approval of Dr. John H. Longwell, dean of the College of Agriculture, called for establishment of an annual summer camp for teenage boys from south Missouri Ozark counties where forest management problems have proved most acute. Realizing that the program would have to be as broad as the varied needs dictated by the problems to be overcome, while still offering plenty of appeal for the restless

spirits of normal boys, Dr. Westveld sought the cooperation of educational and recreational leaders in related state agencies and the U. S. Forest Service.

L. E. McCormick, extension forester, and Lee K. Paulsell, assistant professor of forestry and resident forester, at the University Forest, were named to direct the camp program in its pioneering stages. Working together, McCormick maps the educational program and serves as an instructor while Paulsell serves as camp director and instructor in logging and milling.

The balance of the camp faculty is drawn from the University of Missouri's Forestry Department, the State Conservation Commission, the U. S. Forest Service through its Shawnee National Forest, State Vocational Agriculture Departments and the Missouri Extension Service. Adequate trained personnel is made available by the cooperating agencies, but camp officials still must cope with financial problems.

At the outset it was apparent that sponsorship of the boys would be needed to provide the camp program at no charge to the campers or their parents. Last year, in the first year of the camp program, funds to pay the board bills were provided by a single industry, sponsored through the Statewide Forestry

Committee of Missouri. This year, an expanded program necessitated more funds, and local business firms in the area of the camp rallied to its support, augmenting funds provided by the industry organization.

Camp facilities are provided by the University of Missouri which maintains a year-round camp installation for forestry students near Poplar Bluff in Southeast Missouri and not far from Lake Wappapello, one of the state's largest lakes. The camp is situated in the University Forest, an experimental and training area comprising some 9,000 acres. All of the camp facilities together with faculty personnel and University-owned equipment, are made available for the youth camp program. A barracks-type dormitory, classrooms, kitchen and mess hall provide for the needs of groups numbering as many as 40 persons for prolonged visits.

In the initial encampment last year, boys were selected from a six-county area. They were nominated for camp participation by their

vocational agriculture teachers or their county agents and 4-H club leaders. General qualifications consisted of proven interest in forestry and conservation as shown by project work accomplished. The enrollment was also limited to boys between the ages of 14 and 18 years. Limitations of housing facilities and financing have restricted the number eligible. Yet it was possible this year to increase enrollment by 50 per cent and next year the camp officials hope to bring in the full quota of 40 boys.

Operated on an experimental basis last year, the camp program gained a degree of permanence this year, and by the end of the June 6 to 10 camp period, it became apparent that the youth program is filling the vital role for which it was conceived. However, its effectiveness can best be appraised by a review of the studies undertaken and certain early manifestations of a trend toward better farm woodlot management and community fire control efforts directly attributed to

the training received at the camp.

Following their now established agenda in the opening session this year, the boys were introduced to their camp officials and instructors. They were divided into two groups for purposes of scoring competitive sports and other activities with one group designated the "hardwoods" and the other the "softwoods." After a hearty lunch they joined in the first of a series of classroom sessions devoted to forest protection and conducted by William E. Towell, assistant state forester for the Missouri Conservation Commission, and Owen L. Lashley, assistant ranger, U. S. Forest Service.

On the second day, they participated in classes on wildlife management and conservation under the guidance of Al Hoskin, field service agent for the Conservation Commission, and a course in forest measurements and computations taught by McCormick. By the third day in camp the boys were ready for practical instruction in using logging tools—a course conducted in the woods by camp director Paulsell. A full morning was spent with each boy being given an opportunity to use both one and two-man chain saws in bucking logs and some of the more mechanically-minded even mounted a crawler tractor to try their skill at snaking logs out of the woods.

In an afternoon class, Dr. R. E. McDermott, associate professor of forestry at the University of Missouri, lectured the boys on identification and use of native trees and shrubs. He illustrated his talks with exhibits of specimens collected from species in the forest area and dis-

(Turn to page 56)



Classroom sessions are combined with field work to give balanced program.

Camp Director Lee K. Paulsell teaches boys to secure log on the saw carriage at the University's experimental mill





Harry Rossoll has helped to build Smokey into the well-known character he is today

500 FOR SMOKEY



"SMOKEY SAYS" cartoons, which Harry Rossoll has been drawing for over a decade, have reached the 500 mark.

According to Artist Rossoll, Smokey has a one track mind. He hears nothing, sees nothing and says nothing about anything except fire prevention. It is Rossoll's job to translate what Smokey hears, sees and says into cartoon form—four one-column cartoons each month, twelve months a year.

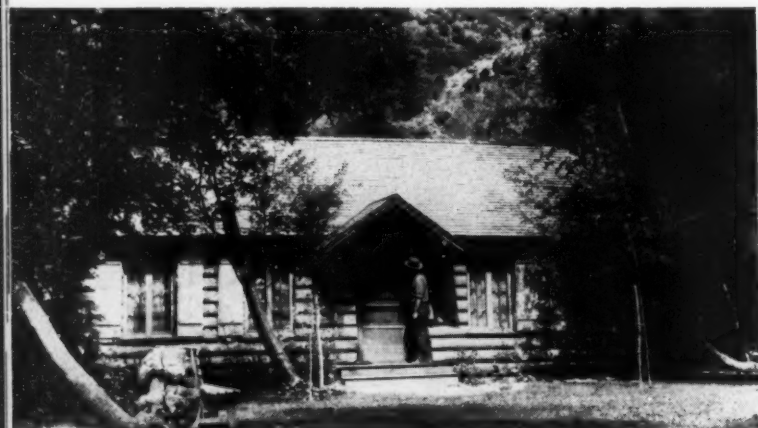
For ten years Smokey has been saying "Prevent Forest Fires," in many different ways, as that is the purpose of the cartoon—to serve as a constant reminder to the public that they, and only they, can combat the basic problem in forest fire prevention. That basic problem is human negligence.

All of the Smokey cartoons become a part of the Cooperative Forest Fire Prevention Campaign conducted by the Forest Service, the state forestry departments, and the Advertising Council.

Most of the summer home sites on national forests are located on forest roads that connect with paved or improved highways



This summer home belongs to G. J. Weiser, and it is located at Pinecrest on the Stanislaus National Forest, Calif.



A contractor owns this national forest summer home. It was built in Logan Canyon on Cache National Forest in Utah

NATIONAL FORESTS

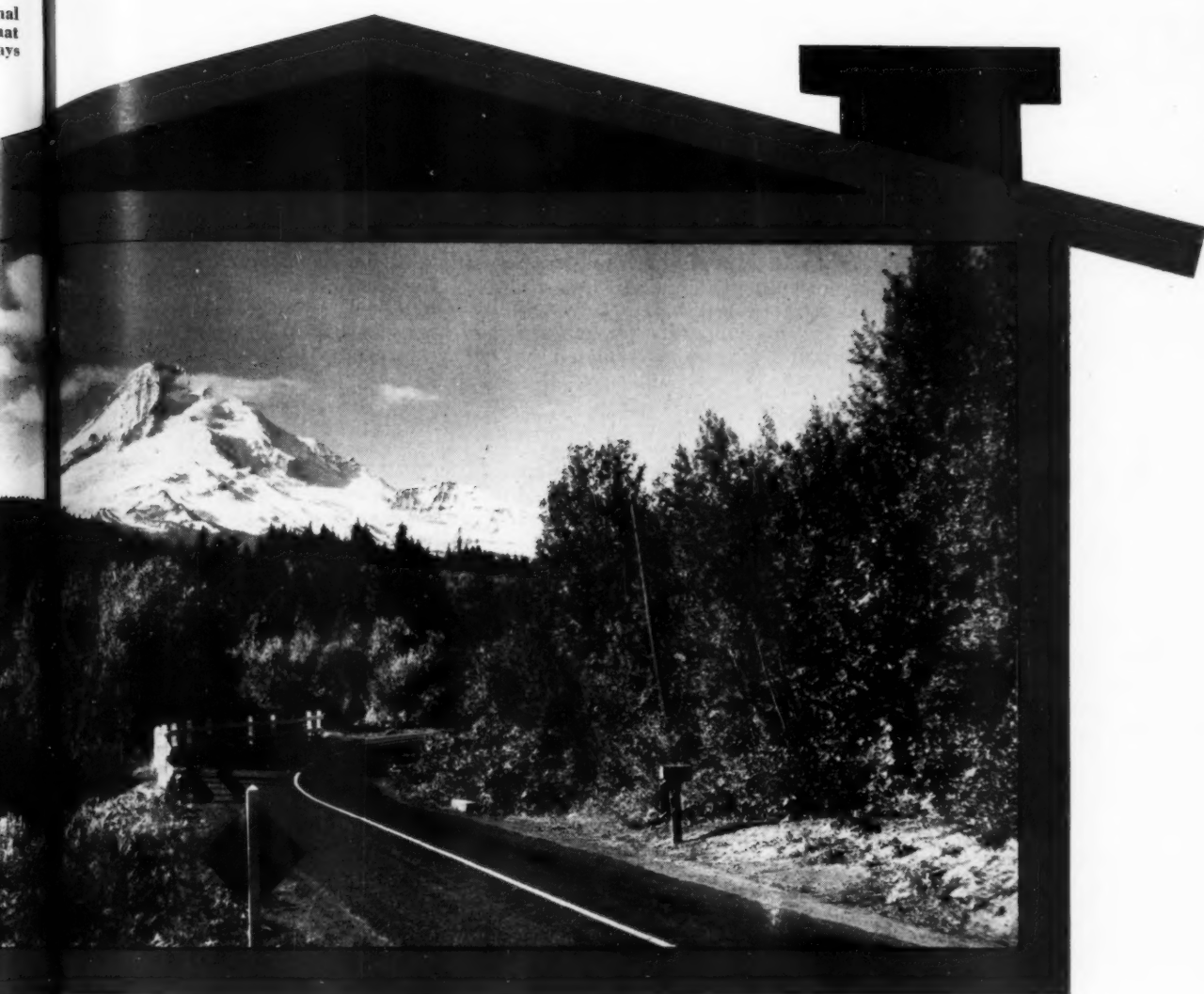
By M. D. BELLAMY



WOULD you like to have a summer home in a national forest?

Every year many persons write to the U. S. Forest Service inquiring if it is possible for them to have a summer home in a national forest. Fortunately, the answer is "yes"—providing the number of requests received does not exceed the number of sites available.

The Forest Service is aware that summer homes are one of the most appreciated recreational values of the national forests and has made provision accordingly in most—but not all—national forests. At the present time, more than 16,000 sum-



T SUMMER HOMES

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mer homes have been built on national forest land.

Areas suitable for summer homes are selected by experienced forest officers. They are surveyed into lots or units of about one acre each. Five to thirty, sometimes more, units may be located in one area in such a way that the forest environment is preserved and each site will appear isolated from its neighbors.

In allowing private citizens to build summer homes on national forest lands, the government is granting an exclusive private use of public property. It is, therefore, only natural and proper that such use must not be allowed to interfere

with public or semi-public use of the forest as a whole. For that reason, summer homes may be permitted only "on areas which because of topography or location are unsuitable for public use or on areas which, as far as can be foreseen, will not be needed for present or future use and where the presence of summer homes will not interfere with public needs on other areas."

After selection of a site and approval of the applicant by the Forest Service, a Special Use Permit is issued at a cost of from \$20 to \$50 per year, depending upon location, facilities, size, etc. Although the builder never gets title to the land,

renewal of the permit from year to year, at a modest fee, is assured if reasonable rules are observed.

The regulations and conditions governing the construction and use of summer homes are not many and are only those necessary to safeguard the national forests and their uses. Many times, the home owners and their property are protected by such safety measures.

Restrictions and special rules naturally vary with local conditions; but, in general, the main ones are:

1. Buildings on summer home lots must be of a type and materials appropriate to the forest environ-

(Turn to page 51)

MEMBERS who have been asking for details on the initial conference of AFA's Landownership Committee last month in San Francisco will be glad to learn that the pilot California study appears to be off to an encouraging start. (See pages 6 and 7.) As was expected, the committee members, all of whom were present, started their work in a cool and collected manner. What was really reassuring, however, was the helpful, cooperative attitude of some 40 other participants, representing every phase of landownership in the state. The

the participants. Those people were there to face issues, and there was some good, combined thinking."

"Excellent" was the comment of J. Walter Myers, Jr., secretary of the Forest Farmers Association, Atlanta, Georgia. "But the meeting certainly showed that we've got a project here that literally is as big as all outdoors. In California, the situation looks like a four-way hookup to me—soil, water, forestry and recreation including wildlife. All four of these categories will have to be considered in any and every recommendation made. It's too early to tell yet, of

of which 46 percent or 46 million acres is in federal ownership. In addition to the national parks and forests, this includes Bureau of Land Management, 17 million; Bureau of Indian Affairs, 683,000; Bureau of Reclamation, 1,809,000; Soil Conservation Service, 27,000; Fish and Wildlife Service, 24,000; Army and Air Force, 1,400,000; and the Navy, 1 million.

In commercial timber crop land, California has approximately 17 million acres which is evenly divided between federal and private ownership. Of the eight million acres

ENCOURAGING START ON AFA STUDIES

In San Francisco last month, AFA's Landownership Committee organized the initial phase of its program—a survey of California. The names and addresses of these committee members are listed on this page as it is hoped that AFA members will contribute their ideas to this program

manner in which they submitted both facts and ideas to the committee suggests that they really want this study, feel that it is needed, and intend to make it work. If this same attitude prevails when the committee moves on to Michigan and North Carolina, the three initial pilot studies are going to be a success.

"Maybe we've matured enough to do this and do it right," Dr. Harold G. Wilm, associate dean of the College of Forestry of the University of New York, told us following the conference. "Landownership is a touchy problem and many of us can recall previous western meetings where rock throwing was the order of the day. There was none of that here. The temper of the participants was moderate, the approach almost impersonal."

Said Lloyd Partain, of the Curtis Publishing Company, "I'll say this—that second day when every conceivable interest was on hand to take part, was one of the most rewarding and profitable days I've ever spent in the resources field. Of course, Swede (Chairman DeWitt Nelson) deserves a lot of the credit, but so do

course, but I'm wondering if there are any pat solutions in the sense that we'll be able to make 10 or a dozen recommendations that will provide valid solutions. Perhaps it will be more a matter of what can be done to accent good trends and play down undesirable trends—that and some good, long-range planning for the future."

Carl D. Shoemaker, editor of the Conservation News Service, Washington, who represents recreation and wildlife on the committee, said, "What impressed me was the way every single one of those people stressed the importance of recreational outlets in view of the state's exploding population."

And exploding is the word for California's population. Now approximately 13 million, it increases at the rate of 1,000 people a day, Chairman Nelson told the committee. Among other things, it has been taxing the recreational facilities in a state that already has 123 state beaches and parks in addition to four million acres in national parks and 20 million in national forests. Total landownership in the state is 100 million acres in round figures

The Committee which made the outline for the study consisted of the following representative citizens:

STATE OWNERSHIP

DeWitt Nelson, Chairman
Director, Dept. of Natural Resources
315 State Office Building No. 1
Sacramento 14, California

FEDERAL OWNERSHIP

Jay H. Price
4802 North 29th Place
Phoenix, Arizona

INDUSTRIAL OWNERSHIP

George L. Drake
Consulting Forester
1124 Puget Sound Bank Building
Tacoma 2, Washington

SMALL PRIVATE OWNERSHIP

J. Walter Myers, Jr.
Executive Secretary
Forest Farmers Association Cooperative
P. O. Box 7284—Station C
Atlanta, Georgia

WATERSHEDS

Dr. Harold G. Wilm
Associate Dean
College of Forestry
University of New York
Syracuse, New York

WILDLIFE AND RECREATION

Carl D. Shoemaker, Editor
Conservation News Service
232 Carroll Street, N. W.
Washington 12, D. C.

RANGELANDS

Otto J. Wolff
912 St. Patrick Street
Rapid City, South Dakota

INDUSTRY

Lloyd Partain, Manager
Trade and Industry Relations
The Curtis Publishing Company
Independence Square
Philadelphia 5, Pennsylvania

privately owned, about 50 percent is held by 18,000 small owners. The ownership picture is complicated by many millions of acres of brush-covered lands which have both range and watershed values, but which are divided in a very complex ownership pattern.

At present, California is the second timber-producing state in the nation, harvesting six billion board feet a year. Unfortunately, the milling capacity is considered excessive in relation to the annual growth. In general, the large timber owners are doing a good job of forest management; but there is a tremendous waste and sawmill residue in connection with most of the state's lumber operations. However, the most serious problem in the field of forest practices lies with the small owner who, by the nature of things, is forced to look to today's dollar rather than to the future of his resource.

Since 15 percent of the state is in agricultural or developed lands and another 25 percent is desert—largely in public ownership—approximately 60 percent of the state or 60 million acres provide the basis for the AFA study.

The report of the committee and the comments of Mr. Shoemaker, representing recreation and wildlife on the committee, are presented on pages 6 and 7 of this issue. Of particular interest was the proceedings of the second day of the conference at which time representatives of the various land use agencies presented their views. AFA's report on these proceedings as presented here was taken from notes made by J. Walter Myers, Jr., acting secretary of the meeting:

Second Day of Committee Meeting, July 26

The committee reconvened at 10:00 a.m. at the State Chamber of Commerce Building at 350 Bush Street, San Francisco, California. Meeting with the committee was a group of invited guests including a cross-section of organizations in California having an interest in landownership in the state.

Chairman DeWitt Nelson presided and opened the meeting with a word of welcome to the group. Nelson then presented the persons present with the "Tentative Outline for Discussion Only — Study of Landownership in California." He emphasized that this was a tentative outline only, and that its principal purpose was to stimulate further discussion by members of the organ-

izations present. Such constructive comments and criticisms as the individuals present might desire to make would be most welcomed by both he and the committee.

A brief summary of some pertinent comments offered by different individuals follows:

Nelson mentioned that a need for critical examination and pilot studies by counties exists and should include soils, water and range as well as timber.

Charles Connaughton, U. S. Regional Forester, California: Interstate and intrastate problems are inherent in a study of landownership patterns, particularly in reference to water.

Jack Beaver, Assemblyman, California Legislature: Population trends and growth should be included and emphasized in the study, particularly with reference to procedure. A possible legislative committee might be appointed at some future date on this subject. The committee might also consider if a continuing study is desirable. He added that we are at the crossroads in the management of wild lands as the key to the water problem.

Newton B. Drury, Chief, California's Division of Beaches and Parks: Some means to adjudicate differences in use is needed.

DeWitt Nelson, Director, California's Department of Natural Resources: The American Forestry Association hopes this study will stimulate further studies. It should be borne in mind that the scope of the presently-planned study is limited.

Lloyd Partain, Curtis Publishing Company: The relationship of landownership patterns and population trends and pressures created by population factors must be considered even if only to outline possibilities for future studies.

M. J. Shelton, Deputy Director, California's Department of Water Resources: Land use and changes which are going to take place should be a major point in this study.

F. L. Lathrop, Consultant: Analyze studies previously made including surveys, history and background. It would also be valuable to investigate historical state and federal relations, including how much land acquired by federal government by years; timber cut through exchange process and not listed in timber sales; and exchange of federal lands. Incidentally, the state of California lacks original surveys on some 16 million acres of land.

John H. Fraser, California County Supervisors Association: One of the problems in studying landownership patterns is the problem of ample recreational facilities versus tax income.

W. P. Wing, California Wool Growers Association: Private ownership can possibly do the same job as federal or state government with proper assistance.

Sven G. Anderson, California State Soil Conservation Commission: In many cases, some of the best agricultural lands are being taken over by urban development.

Bert Smith, Irrigation Districts Association of California: A meeting should be held six months from now to summarize the findings before putting the results of the study into final form.

W. B. Carter, Watershed Fire Council of Southern California: Owners of wild lands have a responsibility in protecting the watershed area encompassed by these wild lands.

Jack Beaver: One desirable end for this present study would be to point the course and direction for future legislative committee study. This AFA Landownership Committee should make itself available for advice and counsel to the state legislature.

Rex B. Goodcell, Jr., Assistant City Attorney, Los Angeles: It would be a real step forward if this study could correlate information revealed by other pertinent studies. Taxation is a big problem in landownership and is often related to ownership.

R. R. Best, BLM State Supervisor, California: His organization may have information of use to the committee.

C. E. Johnson, Forester, National Park Service: Need to clearly define phases to be followed and studied.

P. A. Thompson, Western Lumber Manufacturers Association: Landownership is a complex problem. The ideas of the various pressure groups should be set forth and the conflicts outlined. Legislation will usually trigger any action.

Knox Marshall, Western Pine Association: His organization likely has information of value to the study director.

John A. Zivnуска, Associate Professor of Forestry, Univ. of Calif.: Form of utilization and its relationship to ownership class is important. Smaller and smaller national forest timber sales may not be desirable.

DeWitt Nelson: In summary, the
(Turn to page 57)



Chief Fire Warden on the Clearwater, Bert Curtis, sizes up thunderstorm.

watched fire dance around the stove and telephone in his tower, yet he still insists he'd rather be up in a lookout tower than anywhere else during a storm.

Even with all the safe-guarding of modern lookout towers with heavy ground wires, you've just got to love lightning to go about your business in one of them when the bolts are cracking all around. For those with this craving, the Northern Rockies can satisfy them every fire season.

One July night, a lumberjack left a tavern at the height of a thunderstorm. Without ever turning on his car lights he drove over ten miles of winding woods road back to camp. Deputy Warden Dwain Space of the Clearwater Association hiked six and a half miles of trail in the dead of night at top speed.

"Bright as day all the time," he recalls.

Back in the days when lookout towers were not so completely lightning-proof as they are today, even the lightning lovers preferred to be elsewhere during storms. A. B. (Art) Curtis, Chief Fire Warden at the Clearwater Association and

LIGHTNING...

O. A. FITZGERALD

UNTIL we learn how to pull the stingers from thunderstorms, it's a good thing for our forests there's no shortage of fellows like John Curtis, Deputy Fire Warden for the Clearwater Timber Protective Association out in Idaho. Otherwise, our lookouts might not be so expertly manned when lightning, the bad boy of the Northern Rocky Mountain timberlands, is acting up.

Curtis, you see, actually loves thunder and lightning.

"I'd rather be in a lookout tower than anywhere else when a storm goes over," he says. And the reason isn't because the well-grounded tower is just about the safest place around.

To people whose attitude towards thunderstorms ranges from plain, simple fear to a terror that sends them scurrying to a sound-proof closet, Curtis just doesn't appear quite normal. Yet there are lots like him guarding our forests today. Lucky, too, for these Idaho woods are one of lightning's favorite playgrounds.

Curtis' love for lightning has survived some severe tests. One time he was standing on the catwalk during a particularly severe storm. Lightning was crackling all around. Just as he raised his hand past the railing a flash of juice jumped out to his index finger. For a week that finger was numb. John has been temporarily blinded by flashes, has

brother of John, recalls how he and a couple of smokechasers missed by minutes being blasted out of a tower. Their camp was a few hundred yards downhill from the Bertha Hill tower. As the storm broke they started for the tower to begin their watch for smokes.

A short distance from the cabin, Curtis asked his companions to wait while he went back for a jacket. In just about the time it would have taken them to reach the tower, a bolt struck it, ripping a hole in the roof and setting it afire.

"I'll bet Bertha Hill has taken enough electricity to light New York City," Curtis insists. Occupants of other lookouts in the Northern Rockies probably feel the same way.



Taking a reading on a fire from the Bertha Hill lookout tower on the Clearwater

... Still a Troublemaker

Lightning is the culprit in northern Rocky Mountain timberlands, touching off eight out of every ten fires

Many a woodsman can point to a tree he slept under a night or so before lightning picked it for a target.

For an hour and a quarter one noisy July night, a lookout in the Priest Lake section sat in his tower and counted strikes. During this time the tally passed 300. Yet when the fury had passed and he began looking for smoke there wasn't a single fire to report.

Seldom are thunderstorms so considerate of the forests astraddle the Rockies in Idaho and Montana.

Another time, one single bolt started forty, yes forty, different fires. It landed on a phone line about midway between two lookouts in

(Turn to page 53)



A new steel lookout tower (left) rises above old wooden tower. Steel towers offer more protection from lightning

Veteran mahogany operators hope
for a find such as "Babe" only once in a lifetime

MAYAN MONARCH



This crew came to the jungle to make color motion pictures of mahogany, and discovered the Mayan Monarch



The Mayan Monarch was a figured tree. It was not only huge in size, but sound as well, with hardly a defect.

By GEORGE N. LAMB

ABOUT four centuries ago the Mayan Monarch was born in a steaming Central American jungle. He first saw the light of day high on a branch of his mother tree overlooking a rolling and shimmering sea of green. His cradle was a thick capsule the size and shape of an inverted pear in which he and his brothers and sisters were closely packed. One day his cradle opened wide and a gust of wind sent baby Monarch windmilling to the ground half a mile away.

Luckily for the Babe, he dropped where a fallen branch had gouged through the forest litter and exposed the soil. Through still greater good fortune, a fleeing deer bounded by and kicked some of the rich soil over him. The Mayan Monarch was planted.

Who was the Babe? The botanists now call him *Swietenia macrophylla*. The lumberman and woodworker in this country call him mahogany. He has many names in many languages because he is known all over the world.

But let's go back in the ancient jungle and see what happened to the Babe. Let's go back even further to the history of the land of his birth. He came from Caribbean slopes that reach from southern Mexico to the Isthmus of Panama. His immediate surroundings have had a strange human history. The soil in which he grew was once agricultural land that supported one of the most civilized peoples of the New World. They were distinguished for their architectural genius, astronomical lore and picture writings. They had a more accurate calendar than we have today.

This Mayan civilization dated back many centuries before America was discovered, several thousand years, according to some scientists. In any event, these people seem to have disappeared quite suddenly. Some think it was because of war or pestilence. However, we think it was because the soil gave out. At best it was only a thin covering over disintegrated limestone. The Mayans apparently had no knowledge or the means of maintaining fertility and preventing erosion. They simply cleared new land as their farms gave out. Finally, there was no more land to clear. The old farms reverted to the jungle in which, many centuries later, the Babe was born. Not far from Babe's birthplace, a

crumbling Mayan ruin stands high on a cliff. In the making of a road into Babe's home, a bulldozer uncovered a Mayan stone mill, perfect except for a scratch of the bulldozer.

Now, back to Babe. The rains came and in a couple of weeks Babe pushed two leaflets through the soil and again saw the light of day. In spite of the hazards he had survived, he was still a frightful insurance risk. Insects, parasites and animals, large and small, were all about but somehow he survived.

In four years he was only six feet high but better able to withstand the crowding growth of the lush jungle. Not only that but he had to fight for a foothold in the rocky soil. As a result of this battle for the sun, he was a spindly thing losing his earlier branches and growing only at the top.

When he was about thirty years old, he got a break. A huge branch above him, honey-combed with ants, was snapped off in a storm, crashing a hundred feet away. This opened up a big patch of blue sky. From then on he not only shot upward faster but his trunk became sturdier and his roots spread out and thickened. In a few years he raised his head above the surrounding jungle and spread his limbs above it. He had won his fight for survival and he was no longer a babe nor a spindling child. Still, he was no preferred insurance risk. Far from it. Now he was exposed to the full shock of the tropical storms. Only his spreading roots and his sturdy fibers kept him from being rent apart as happened to many of his neighbors. This did happen to his cousin, dainty *Cedrela* (Spanish cedar) that stood near him.

Perhaps his greatest danger was Jaguey, the strangler fig. One of his own brothers whom he could see twenty tree lengths away, was attacked by this demon of the jungle. The strangler starts as a seed lodged in a crotch. Soon it sends a string-like root to the ground. This stringy root attaches itself to the trunk sending out flanges, wrapping itself around the tree. Sometimes the pressure of growth-thickened wood will burst these bonds and the scarred tree survives.

The Mayan Monarch, for that he is now, lived to see his brother succumb to the strangler. In the end his brother's trunk was completely encased. The strangler sent out his own branches. Finally the strangler became the tree and brother was no more.



For four hundred years the Mayan Monarch lived deep in the jungle, remote from human habitation. Discovery meant his doom as a jungle king

At last the Mayan Monarch was the Lord of the jungle and he looked the part. His massive, buttressed roots extended laterally for a distance of thirty feet. They swung outward fifteen feet about the jungle floor. His trunk was nearly seven feet thick, fifteen feet from the ground. The entire trunk including the base was only sixty-five feet, as the Monarch reached open sunlight much earlier than do most mahogany trees. As a result its massive branches towered for another sixty feet into the air.

By this time the Monarch was the host to countless forms of jungle life. Vines as thick as ships' cables reached the topmost branches. Ferns, moss and wild orchids grew on the

trunk and branches. Huge clustering air plants (epiphytes) clung to the trunk. The Monarch harbored ants' nests (black) resembling the gray wasps' nests we see in this country.

Then came the fateful year for the Mayan Monarch. He lived deep in the jungle and remote from human habitation, roads or logable streams. The only trails that passed beneath his spreading branches were game trails. The only humans he ever had seen were the *chicleros* who, with donkeys, came deep into the jungle to bleed the *sapodilla* tree. Why? Because gringos and lots of other people like to chew gum. In Chicago people like to point out the
(Turn to page 59)



PERHAPS you were able to take that long awaited fishing trip in California's rugged high country this summer. You were delayed by a construction crew repairing the narrow mountain road and waiting impatiently for the obstruction to be cleared, you noticed one of the workmen gazing rather wistfully in your direction. You thought it was the new fourdoor you had saved for so long or perhaps it was the fishing poles tied to the rack on top that caused his apparent envy. But the workman turned back to his shovel and you saw the C.D.C. stenciled on the back of his blue shirt—C.D.C.: California Department of Corrections. The workman was an inmate from one of the state prisons. You glanced around uneasily. No armed guards. No uniform at all. The obstruction was cleared, the cars moved on, the scene forgotten, but later when rainbows sizzled over a pine-wood fire, you thought back and wondered. What was it like?

This is quite a different picture from the traditional prison pallor, striped suits, shackles, chains and heavily armed guards. Some states are still under the gun, but several are beginning to follow California's example in the use of honor camps,

camps without fences, walls or guns. In 1948, Michigan began a forestry camp program which is rapidly expanding. Wisconsin soon followed, and just recently Oregon began a reforestation program on the famous Tillamook burn with inmate labor.

But it all began in California some forty years ago. Overcrowded prisons and a shortage of labor willing to work in California's remote areas induced legislators to enact California's first comprehensive prison labor law on August 8, 1915. During the following month, the first state highway prison road camp was established. By the end of 1916, 385 prisoners from San Quentin and Folsom prisons were working in the road camps.

In 1923 the laws were revised and the resultant act is still in effect today. It provides for a small wage to be paid to the inmates, two-thirds of which is required to be paid to dependents who might be receiving state aid. The inmates can volunteer allotments to dependents not receiving state aid. Most of the inmate's earnings are held for him until he is released from prison. The rest is credited to his account. He may use these funds for canteen purchases: personal items such as toilet

agencies are used by the Department of Corrections to feed, clothe, guard, and transport the camp inmates. The camps were not designed to make a profit but are self sustaining.

The inmates are credited with a net of \$15 per month with the exception of the head cook, who receives \$20 per month and the other four members of the camp crew who receive \$18 per month. This differential in pay is due to the fact that the members of this five-man camp crew work seven days a week. All camp inmates receive thirty cents per hour for fire overtime in case such overtime is not compensated for by time off during regular working hours. The Division of Highways, the United States Forest Service, and the California Division of Forestry furnish the camp sites, camp buildings or tents as the case may be. The inmates are supplied directly from the state prisons at San Quentin, Folsom, Soledad and from the California Institution for Men at Chino.

The state prison at Folsom is California's maximum security prison. Its inmates have the reputation of being some of the toughest in the nation. It has class "E" or minimum security prisoners also, but for a long time the inmates from this prison

NO PRISON RIOTS HERE

By LARRY BURTON



goods, candy, cigarettes, books and other items.

In the road camps, the Division of Highways operates the camps out of a daily wage credited to each inmate. That agency deducts the cost of feeding and all other camp costs except guarding and the transportation of prisoners between the camp and the prison. These latter costs are paid by the Department of Corrections. The inmates then receive credit for net earnings over and above the deductions made by the Division of Highways. This averages about \$15 per month.

In both the state and federal forest camps, the daily wages paid for inmate labor by the cooperating

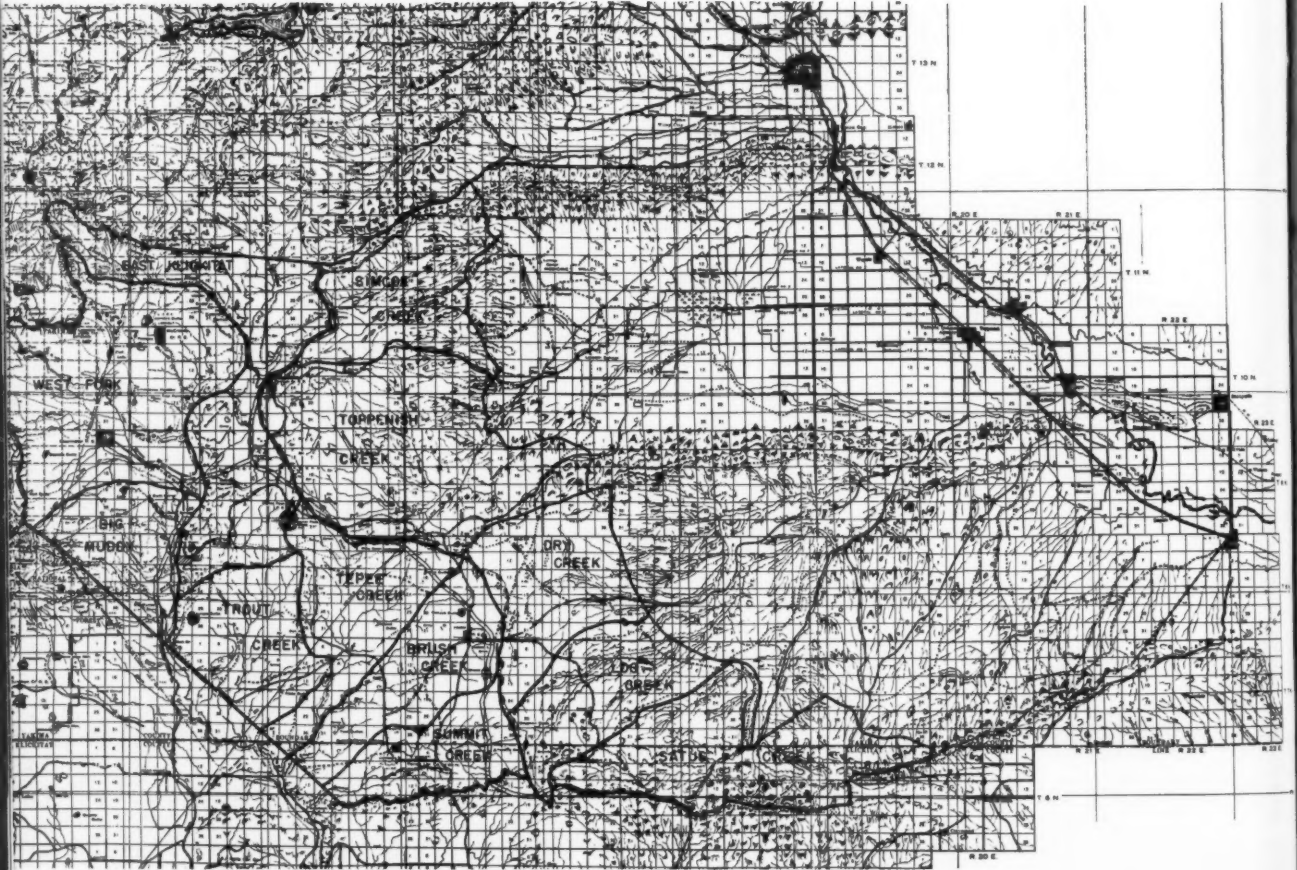
were released to honor camps through the institution at Chino and the prison at San Quentin. This practice has been discontinued since the acceptance of Folsom men as excellent workers.

The escapees are called walk-aways, emphasizing the relative simplicity of escape from these camps. In spite of this, or perhaps because of it, the honor camps have a record of less than 2% escapes in forty years and over 90% of these were returned.

Due to the scarcity of suitable projects, the California road camp activities have declined from a peak of seven camps in 1930 to three at (Turn to page 44)

Initiated to reduce pressures on overcrowded prisons, honor camps are providing one answer to inmate idleness, and are remarkably successful in rehabilitating prisoners

This forester's duty is more complex, as
he is not merely working with a forest,
but also with the ancient Indian beliefs



Map of the 1,200,000-acre Yakima Indian Reservation in southeastern Washington State

Science and Mythology Manage a Forest

By IRVING PETITE

ONE of the only virgin forests remaining in continental United States and one whose value is estimated at more than \$67,000,000.00, is supervised by a forester who receives his prerogative—in matters pertaining to timber sales—from a Tribal Council of 14 elected chiefs.

This is the Yakima Indian Forest on the 1,200,000 acre Yakima Reservation in southeastern Washington state. Comprising half a million acres of some of the most rugged terrain in North America, the Indian forest is predominantly ponderosa pine. Associate species are western hemlock and red cedar, with some mixture throughout of western larch, white pine, Engelmann spruce and pure lodgepole pine type, generally at higher elevations.

The forest reaches upwards along the eastern slope of the Cascade Mountains, and along the shoulders of Mount Adams, 12,307-feet high and Washington's second peak. Along portions of this terrain the rainfall rises to 50 or 60 inches annually and Douglasfir forests of the rain or West Coast forest type occur.

Management is under the direction of Richard Delaney, forestry official of the Yakima Indian Agency

at Toppenish. With a staff of 12 to 18 men, most of them forestry graduates, Delaney plans and puts into effect the practices which are most beneficial for the Indian forest.

"Our broad objective is to convert an old, overmature forest into a healthy growing condition as soon as possible consistent with the recognition, development, utilization and protection of all the values involved such as grazing, watershed and fish and wildlife," Delaney says. His recognition of the forest as the main basis (together with reservation land) of support for the 4,388 enrolled Yakimas, gives Delaney a special sense of obligation and devotion to his work.

His duty is the more complex because he is not working merely with a forest but also with ancient Indian beliefs. Until recently, for example,

the Indians would not allow timber to be sold or thinned.

"For untold generations before the encroachment of our modern world, the Yakima Indians found in the forest both material and spiritual values," Delaney explains. In the mountain fastnesses live the game and fish upon which the Yakimas still depend for much of their living, as well as the small berries, fruits and roots. They still dig spring roots in the valleys and follow the seasons, ending up on the shoulder of Potato Hill, near Mount Adams, for huckleberries in the fall . . . when they erect a veritable teepee city to pick the lush fruit of 40,000 burned-over acres.

"This annual food quest was (and is) a rhythmic, cyclic way of life in tune with nature and of deep sig-

(Turn to page 54)





Maryland's famous Wye Oak. Photograph by M. E. Warren, Annapolis

81st ANNUAL MEETING

THE AMERICAN FORESTRY ASSOCIATION

SEPTEMBER 30—OCTOBER 4, 1956

Honoring the Golden Anniversary of Maryland's Department
of Forests and Parks

Headquarters—The Armory, La Plata, Maryland
(On U. S. 301 — Forty Miles Southeast of Washington)

Theme—AMERICA'S SMALL WOODLANDS

Sunday, September 30

Registration—LaPlata Armory

Monday, October 1

Morning Session: 9:30 AM to 12 Noon

Presiding—DON P. JOHNSTON, President, The American Forestry Association, Wake Forest, North Carolina
Invocation—REV. NIELL GARGAN, S.J., Pastor, Sacred Heart, LaPlata, Maryland
Announcements—P. REED McDONAGH, President, Charles County Chamber of Commerce

Welcome Address—THE HONORABLE THEODORE R. McKELDIN, Governor of Maryland
 Response—DR. WILSON COMPTON, Vice President, The American Forestry Association, and President, Council for Financial Aid to Education, Inc., New York City
 Report—The American Forestry Association Today, KENNETH B. POMEROY, Chief Forester, AFA, and DeWITT NELSON, Director, AFA, Sacramento, California
 Keynote Address—The Place of the Small Woodland Owner in the Future of America's Timber Supply, DR. RICHARD E. McARDLE, Chief, Forest Service
 Address—The Small Woodland Picture as Viewed by the State Forester, MAURICE K. GODDARD, Secretary, Pennsylvania Department of Forests and Waters, Harrisburg, Pennsylvania
 Address—The Small Woodland Picture as Viewed by Extension, JOHN L. GRAY, Extension Forester, Raleigh, North Carolina
 Address—The Small Woodland Picture as Viewed by Industry, R. VANCE MILES, JR., Forestry Manager, Gulf States Paper Corporation, Tuscaloosa, Alabama

Afternoon Session—1:30 p.m. to 4:30 p.m.

Presiding—WARREN T. WHITE, Assistant Vice President, Seaboard Air Line Railroad, Norfolk, Virginia
 Panel—What's Being Done on the Ground Today in Small Woodlands
 Moderator—J. V. WHITFIELD, President, Forest Farmers Association Cooperative, Burgaw, North Carolina
 By the Extension Forester—A. N. LIMING, District Extension Forester, Versailles, Indiana
 By the Farm Forester—DAVID C. BARTON, Farm Forester, Vermont Department of Forests and Parks, Bennington, Vermont
 By the Industrial Forester—HARRY M. ROLLER, JR., Conservation Forester, Woodlands Department, International Paper Company, Mobile, Alabama
 By the Consulting Forester—WILLIAM P. HOUSE, Consulting Forester, Chesham, New Hampshire
 By the Man Who Owns One—LEON SPICER, Woodland Owner, Church Creek, Md.
 Charles County Forestry Awards presented by JAMES C. MITCHELL, chairman, Charles County Forestry Board, La Plata, Maryland

Panel—Progress on Other Fronts

Moderator—O. A. ALDERMAN, Chief, Ohio Division of Forestry, Columbus, Ohio
 By Youth Groups—M. D. MOBLEY, Executive Director, American Vocational Association, Washington, D. C.
 By Farmer Association—CLAYTON M. HOFF, Executive Vice President, Brandywine Valley Association, Inc., Wilmington, Delaware
 Small Watersheds Program in Relation to Forest Conservation—JOHN H. WETZEL, Chief Watershed Planning Branch, Soil Conservation Service, Washington, D. C.
 Forest Practices under the Agriculture Conservation Program—HARRIS W. SOULE, Director, NE Area, Commodity Stabilization Services

Discussion

Evening—6 p.m. Oyster Roast—Chapel Point

Tuesday, October 2

9:30 a.m. TOUR—Cedarville State Forest—Woodland Management Practices, Equipment Display, Exhibit of Forest Products
 7:30 p.m. 81st ANNUAL BANQUET OF AFA, LaPlata Armory
 Master of Ceremonies—LUTHER S. HARTLEY, Manager, Agricultural Development, Baltimore and Ohio Railroad, Baltimore, Maryland
 Invocation—REV. JOSEPH ROBERTS, Pastor, Old Field Episcopal Church, Hughesville, Md.
 Conservation Awards—Presented by LOUIS E. WILSON, Chairman, AFA Conservation Awards Committee, and Director of Information, National Plant Food Industries, Washington, D. C.
 Address—REUBEN G. GUSTAVSON, President and Director, Resources for the Future, Inc., Washington, D. C.

Wednesday, October 3

9:30 a.m. Tour of forest lands owned by the P. H. Glatfelter Company
 1:30 p.m. Visit to Naval Academy, Annapolis, Maryland

Thursday, October 4

Special tours of historical homes in Southern Maryland

Adjournment

THE plethora of recent reports dealing with the conservation and utilization of the nation's water resources may be taken as a sign of increasing interest in these problems. Though a survey of all the reports is necessary for a careful study of our evolving national water policy, the Report of the Second Hoover Commission regarding Water Resources and Power draws together into one place most of the main issues.

What then is contained in the Report on Water Resources and Power that has projected water resource development into the status of a major national issue? One of the contributing factors is the broad scope of the report. Through the utilization of a grant of power enlarged upon by the 83rd Congress in 1953, the Second Hoover Commission was able to expand its investigations into phases previously prohibited by enabling legislation. Virtually every aspect of water resource development was subjected to critical examination by the commission through the extensive research of its Task Force. The end result is undoubtedly one of the most thorough-going analyses of water resource development yet made.

However, the truly unique feature of the Report on Water Resources and Power is not to be found in the utilization of broadened investigative powers. More properly it is the entrance of the Hoover Commission and its Task Force into the field of public policy. Gathering a massive array of evidence through the research of its Task Force and supported by arguments which range from the increasing burden on the taxpayer to the necessity of preserving the federal system; current federal water policies are branded as unrealistic, lacking coordination, and an invasion upon the rights of state, local, and private interests.

National water resources are dwindling rapidly. Many areas, faced with an expanding population, are learning that provision for adequate water supplies is proving an increasingly difficult problem to solve. The Hoover Commission, grimly commenting on the scope of future needs, points out: "By 1975, the total prospective increase for domestic and industrial use over present amounts will be 145 percent—equal to the additional supply of 145 New York Cities, requiring about the flow of 11 Colorado Rivers." It is apparent that the magnitude of nation-

al water problems is increasing.

The controversy resulting from the Report on Water Resources and Power will be welcomed by responsible persons working in the area of water resource development. For many years, various governmental agencies and private organizations have tried in vain to awaken the general public to the urgent need for a clear, unified, and consistent plan of water resource development. On the surface it would appear that public interest in water resource management is manifested only in times of disastrous flood or drought. This condition is easily explainable.

Floods and droughts are dramatic, aquifers and watersheds are not. Nonetheless, it is generally recognized that a sound comprehensive plan for water resource development will result *only* through increased public pressure and a general airing of the issues before the American people. Because the Report on Water Resources and Power reduces issues to terms that can be readily understood by the man in the street, it should serve as a major vehicle to achieve this end.

While lack of broad public interest has been the chief barrier to the evolution of sound water poli-

Our Evolving NATIONAL WATER POLICY

By DAVID G. TEMPLE

Panoramic view of large irrigated area of lettuce and other row crops
Photos courtesy of the Soil Conservation Service



cies, two other forces should be noted. These are: (1) vested interests opposed to some feature or segment of a comprehensive plan; and (2) competition among the governmental agencies concerned with water resource development.

The influence of vested interests on the evolution of sound water policies is easily demonstrable. Internecine warfare among the groups has seriously hindered progress. While there are a wealth of examples to illustrate this point, one of the best is the unresolved clash between advocates of "private" and "public" hydroelectric power devel-

ments within each agency are also aware that certain activities now carried on by their particular agency would most likely be surrendered in the event of a comprehensive and coordinated plan.

However, sound, coordinated, and comprehensive federal water policies are now taking shape. Although emerging policy is still in the formative stage of development, sufficient evidence is now available whereby certain trends may be discerned: (1) similarities of thought exist in many phases of water resource policy, as may be demonstrated through a comparative study of recent publications

"Public indifference, conflicting vested interests, and competition between government agencies pose the most formidable obstacles in the development of effective water policy"

opment. A second unresolved argument is the cost-sharing formula to be used in federal-state projects. A 50-50 formula was advanced as early as 1917, even though not always followed. In 1936, and with the amendments of 1938, requirements for local cost-sharing were almost abandoned, only to come into the fore again about 1944. Today, then, there is a virulent argument revolving around this question, and some people are advocating the 50-50 formula for a second time.

In a general sense, each agency is analogous to a pressure group when competing for funds to fulfill that agency's particular statutory responsibilities. The desire to further agency prestige by large-scale appropriations sometimes results in "cut-throat" tactics. This situation is further encouraged by the fact that there is no unified and coordinated body of federal water policy and that each agency operates under a different set of ground rules. Agency responsibilities are not spelled out with sufficient clarity to prevent duplication of efforts or unproductive rivalries. The inter-agency sniping is generally limited to three chief agencies: the Corps of Engineers, the Bureau of Reclamation and the Soil Conservation Service but other agencies do enter in when their particular jurisdiction appears to be threatened. Most agencies recognize that policy clarification is needed to eliminate inter-agency conflicts. Ele-

in this area; and (2) a "hard core" of interested individuals and organizations, representing a considerable segment of the nation's population, is actively agitating for reform in federal policies. Both of these factors are reflected in the Report on Water Resources and Power, though it should not be inferred that a comprehensive and coordinated body of federal policy is imminent.

LEGISLATIVE HISTORY

While current federal activity in water resource development is primarily the result of policies formulated since 1956, the period prior to this date cannot be discounted completely. With a decision written by Chief Justice John Marshall in 1824 that the commerce clause of the Constitution "comprehends navigation," the federal government expanded its scope to include water resource development. Although Congress limited direct federal participation to the clearing of river channels, further support was given to navigational development through the purchase of stock in a few privately constructed state-chartered canals. The federal government additionally encouraged canal building by grants of public lands to the states. At a later date, about 1880, the federal government took possession of and operated a few canals.

From navigation the federal inter-



David G. Temple

About the Author

David G. Temple, an instructor in geography and political science at Chipola Junior College at Marianna, Florida, believes, "that the best 'marriage' for one who is interested in both geography and political science is the study of governmental programs in conservation."

Therefore, besides teaching, Mr. Temple has been working as a writer-analyst for the Central and Southern Florida Flood Control District on an alternate full-time, part-time basis since June, 1955. His work for that agency has centered around investigations regarding national water policy and the district's relationships with the federal government.

Mr. Temple is a native of Malden, Massachusetts, and was educated in the public schools of that city. Following graduation from high school, he entered the Navy and served until 1947. Mr. Temple then entered the University of Florida at Gainesville, where he majored in political science. However, with the outbreak of the Korean War, he was recalled to active duty.

Returning to the University of Florida, Mr. Temple was awarded the Bachelor of Arts Degree in political science in June 1953. He then entered the Graduate School, majoring in political science and minoring in geography. Mr. Temple received his Master of Arts degree in 1955.

est broadened to include flood control. This development was entirely logical, for a dike or dredged channel inherently produces benefits attributable to flood control. The first example of this activity is to be found in federal sponsorship of the Mississippi River Commission in 1879. Flood control work was occasionally carried on with navigation money, even though local interests were fully responsible for development of flood control projects.

By 1917, the trend in flood control policies was moving further away from local responsibility. Money was appropriated by Congress for flood control work on the Mississippi and Sacramento Rivers primarily to assist in reducing the local cost burden. By 1928, the federal government had assumed primary responsibility for construction of flood control works on these rivers. Meanwhile, an attempt had been made to reduce the burden of navigational expenditures. Between 1910 and 1920, local contributions to navigation were required where it was found that extensive works would be necessary. Following 1920, local interests were required to file a statement of what they would contribute, although actual contributions were never required.

The entrance of the federal government into the field of irrigation came with the passage of the Reclamation Act of 1902. This act established the Bureau of Reclamation as successor to the Reclamation Service of the Geological Survey and granted the bureau power to make surveys and to design and undertake irrigation projects financed through a revolving Reclamation Fund to be replenished from charges levied on water users who were to repay all costs of the project without interest. The repayment period was originally 10 years although this has now been extended to 50 years.

Thus in the period between 1824 and 1927, two federal agencies came to perform functions in water resource development. There was a geographical division of responsibility for the Bureau of Reclamation was limited to the 12 western states while the corps operated in all 48 states. The emphasis of the corps was on navigation and flood control while the bureau stressed irrigation.

NEW DEAL ERA

In 1932, federal interest in water resource development broadened in

scope. Increased federal activity in the water resource development field may be attributed to the changing nature of basic assumptions concerning the nature and scope of the entire governmental complex, of which a new attitude towards water resource development was but one manifestation. These assumptions, recognizing that government had an obligation to provide security for its citizens rather than merely protecting their right to seek it, also provided for increased expansion in a water resource development program.

The number of agencies dealing with water resource development increased rapidly. In some instances new agencies were established under conflicting policies. Although conservation was stressed by all, and certain long-range benefits were recognized, little attempt was made to coordinate activity. Since state and local governments did not contribute to the capital cost of projects, they were rarely consulted in matters of project development. In this climate, federal responsibility for water resource development began to emerge.

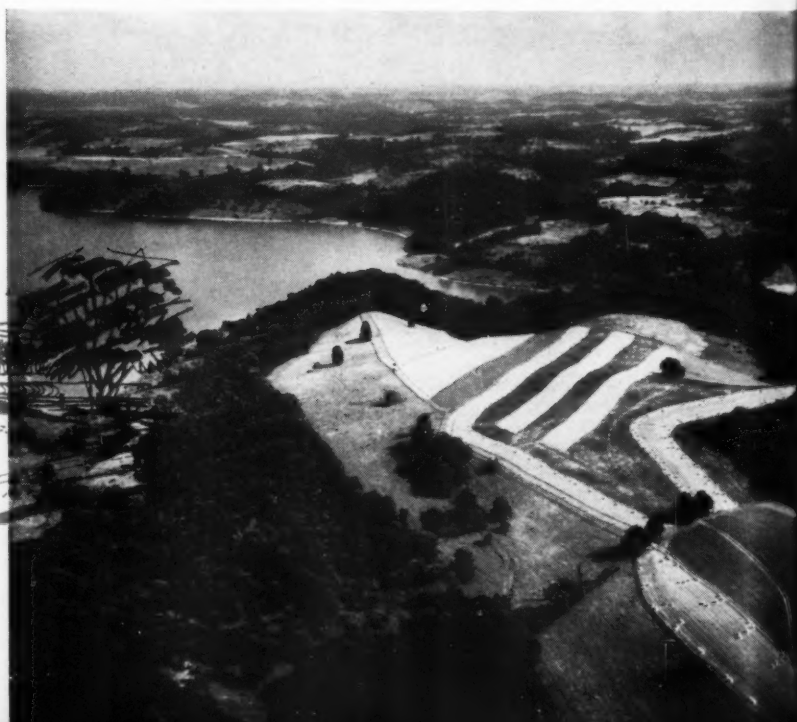
The first of the major flood control acts was passed in 1936. This act, brought on by a wave of successive floods and droughts throughout the nation, recognized watershed development as an effective means for controlling water; and it further

stressed that the river basin approach should prevail. The act recognized that benefits would accrue to the nation through the prevention of soil erosion and that benefits would also accrue to navigation. Primary emphasis, however, was placed on flood control activities which were to be undertaken by the corps. Local contributions under this act were limited to (1) provision of lands, easements, and rights of way; (2) maintaining and operating all completed works; and (3) holding and saving the United States free from all damages that might occur in the process of construction.

The Flood Control Act of 1936 brought another government agency into the area of flood control: the Soil Conservation Service. Established in the Department of Agriculture by the Soil Conservation Act of 1935, to provide technical assistance to farmers for purposes of conserving and achieving maximum effective utilization of soil and water resources, the Soil Conservation Service received primary responsibility for flood prevention on the small watershed, which was to be accomplished through the use of small control structures, terracing, and planting of crops. This program, designed to hold the water in the soil, was one of the first to recognize the vital interrelationship that exists between soil and water resources.

The Flood Control Act of 1938 as

An Ohio farm with its wide strip crops on Lake Piedmont, one of the larger of the flood control reservoirs located within the Muskingum Conservancy District



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sumed federal responsibility for construction and maintenance of reservoirs. The act further provided for the installation of penstocks in dams for the purpose of generating hydroelectric power. However, power development in flood control projects required approval by the Secretary of War following recommendation of the Chief of Engineers and the Federal Power Commission.

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The Flood Control Act of 1944 made an effort to reverse the trend towards increasing federal control over water resource development. This act attempted integration of federal activity, recognized local interest in water resource development, and took full cognizance of the multi-purpose nature of water resource development projects. The Task Force on Water Resources and Power aptly summarizes the act:

"In brief this act: (1) required recognition of the interests and rights of states in water; (2) stated an intent to consider projects on the basis of comprehensive and coordinated development; (3) required that states be kept informed and be given an opportunity to review reports and to cooperate; (4) required that the Secretary of the Interior be kept informed and be given an opportunity to review reports and to cooperate; (5) provided for the disposal of power at Corps of Engineer's dams by the Secretary of the Interior; (6) authorized the sale of "surplus" water for municipal and industrial use; (7) directed the Secretary of War to prescribe regulations for the use of flood control storage in all reservoirs constructed wholly or in part with federal funds; (8) authorized the Secretary of the Interior to construct additional works for irrigation, at Corps of Engineer's dams."

The 1944 act also broadened federal activity to include major drainage, thereby making reclamation an element of flood control. Through this provision, works constructed by the Corps of Engineers with major emphasis on flood control could contain elements of irrigation and major drainage.

The Flood Control Act of 1948 further recognized the close relationship existing between flood control and major drainage. This act reverted back somewhat to the earlier idea that local contributions were required to defray construction costs in new projects. Benefits chargeable to reclamation and land enhance-



Water has many uses and is related to many types of human activity. The standard of living in a locality is raised by water development projects



Furrow irrigation, on Union Sugar Company property in the Lompoc Valley, California, shows "spiles" method of syphoning water from the head ditch

ment were to be paid by local interests. Easements, rights of way, and maintenance costs continued to be furnished by local interests. Under this plan a partnership exists between the federal government and local interests. By requiring local contributions to what had previously been considered as non-reimbursable functions, the act of 1948 represented a shift in water resource development.

Two significant reclamation acts were passed in 1939. The first of these acts provided that receipts and collections from the various reclamation projects, including those receipts from the sale of hydroelectric power, be deposited in the Reclamation Fund. The second act took cognizance of the importance of hydroelectric power and provision of municipal water supplies in determining the feasibility of a proposed

project. The act also altered cost allocation procedures regarding flood control and navigation by making them non-reimbursable. Prior to this time, all costs had been considered as fully reimbursable. This act further provided for the sale of hydroelectric power through contracts not exceeding 40 years in length. Preference in negotiating contracts was given to municipalities, public corporations, cooperatives, and R.E.A. financed organizations. Finally, this act established a "development" period of 10 years during which time construction charges would not be levied on the beneficiaries of project benefits. During this period, water users would be required to pay for water on a rental basis. Since all charges under the reclamation law are levied interest free, a considerable government subsidy is granted to private individuals. Originally the

Secretary of the Interior was empowered to designate projects to be undertaken, limited only by available monies in the Reclamation Fund and by an annual report to Congress. Annual appropriations are now required by Congress and other limitations have been placed on project designation by the Reclamation Act of 1939.

Federal policies that have evolved concerning irrigation and reclamation are summarized by the Second Hoover Commission Task Force as follows:

1. "Construction of works for irrigation of public or private land is a proper responsibility of the federal government.
2. Such construction is to take place in accordance with state laws and with recognition of state interests.
3. Water resources are to be developed to the fullest possible extent and on a comprehensive and coordinated basis.
4. The generation and sale of electric energy and other revenue producing operations is required to make the development self-supporting and financially feasible although water users are required to pay irrigation capital costs to the limit of their financial ability. Operation and maintenance costs are to be fully reimbursable.
5. Development is to take place under restrictions that will provide for family sized farms and that will prevent speculation in land values.
6. The reclamation program is to be a continuing program, not one of individual project construction, whose objective is the development of arid regions.
7. Although water users are to repay a portion of the capital costs of irrigation development, they shall not pay interest. In addition, there will be a development period, if necessary, between the time when an important portion of the project is completed and water can be furnished and the time when repayment on the capital obligation begins."

ATTEMPTS AT ADMINISTRATIVE COORDINATION

Having thus described the expansion of the federal government into



A completed earth filled dam on the Salem Fork Watershed Project, Harrison Co., West Virginia. The distant hills show the general nature of the drainage area

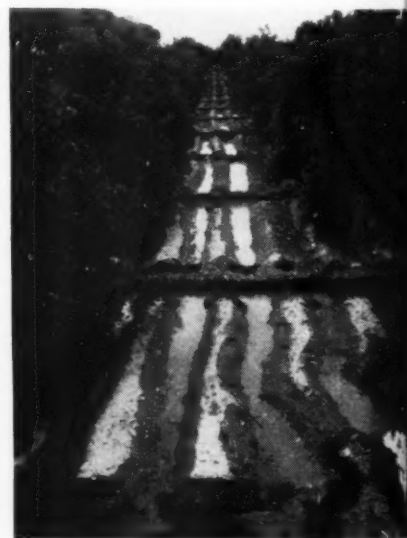
water resource development, let us briefly consider coordination and integration of activity. The Task Force defines areas of federal activity with the following statement:

"Starting 131 years ago with the original objective of improving navigation, federal agencies now deal with the fields of irrigation, flood damage abatement, beach erosion prevention, pollution control, water supply, fish and wildlife conservation, recreation, watershed treatment, power generation and power transmission and distribution. They comprise such activities as planning, surveys, research, collection of data, determination of economic justification, design, project and program review, technical advice, financial assistance, cost allocation, construction and operation of projects, licensing and regulation, rate establishment and approval, and production and marketing of power."

The Task Force further tells us that twenty-five separate agencies scattered among six departments are currently functioning in the water resource development area. There are also five independent organizations.

Attempts to achieve lacking coordination and curb duplication of effort date back to 1939. Through the National Resources Planning Committee, consultation and exchange of information took place among the Corps of Engineers, the Bureau of Reclamation, and the Bureau of Agricultural Economics. Such consultation and exchange of information took place both in Washington and in the field. A

further step was taken toward integration through issuance of Executive Order 8455 on June 26, 1940, which placed coordination and review of water resource development projects in the joint hands of the National Resources Planning Board and the Bureau of the Budget. Executive Order 8455 required each agency dealing with water resource development to submit planning



Flood control projects can include elements of irrigation and major drainage

reports, investigations, estimates of construction costs, programs and similar data dealing with agency activities of the N.R.P.B. Although some progress was made in coordinating agency activities, the N.R.P.B. was abolished by an Act of Congress in August of 1943.

To fill the gap created by Congressional action, the President issued Executive Order 9384 of October, 1943. This order required review of all agency proposals by the Bureau of the Budget before such proposals could be submitted to Congress. Through this order the Bureau of the Budget became coordinator of federal activity in water resource development. By virtue of the fact that agency budgetary requests must first be approved by the Bureau of the Budget, considerable power is wielded by the budget over the entire water resource development program. Although budget's blessing regarding a proposed expenditure is by no means a guarantee of Congressional approval, consideration of that item is at least assured. For this reason, the Bureau of the Budget is able to command agency cooperation.

Consideration of the Budget Bureau's activities would not be complete without some mention of Budget Circular A-47. Due to the aforementioned enforcement powers of the bureau, agency adherence to A-47 is quite rigid. Former Secretary of the Interior McKay characterized A-47 thusly:

"Budget Circular A-47 issued on December 31, 1952, sets forth standards and procedures to be considered by federal agencies in submitting reports and budget estimates concerning water and related land resources. The circular sets forth in considerable detail certain economic, engineering, and other criteria to be used as guides by the agencies. The general objective of A-47, which I endorse, is to encourage the adoption of more uniform agency policies, standards, and practices and to provide a uniform procedure for the presentation of all information bearing on the merits of proposed projects."

Generally speaking, Circular A-47 is considered by many to be a step in the right direction, although Congressional critics have attacked it by Senate Resolution 281 of the 84th Congress, 2nd Session. Besides the endorsement of former Secretary McKay, the Hoover Commission has recommended that the review functions of the Budget Bureau be strengthened.

Efforts toward coordinated activity were advanced in 1943 by a revival of the inter-agency agreements. Participation by the agencies was on a

voluntary basis. The federal Inter-Agency River Basin Committee was formed with the Corps of Engineers, the Bureau of Reclamation, the Federal Power Commission and the Department of Agriculture constituting the original membership. These agencies were later joined by the Department of Commerce, the Federal Security Agency, the Department of Labor, and most recently Department of Health, Welfare, and Education. The agreements provide for agency consultation both in Washington and in the field and also establish subcommittees to study problems common to all agencies. In this study area a notable work has resulted from the efforts of the Subcommittee on Benefits and Costs. This study deals with procedures for economic analysis of river basin projects, formulation of river basin plans, and allocation of costs in a multiple purpose project. Besides special subcommittees to study common problems, the Inter-Agency Committee has sponsored basin and regional committees in which there is participation by state and local officials. For example, in the Columbia River Basin the governors of the seven Columbia River Basin States serve on the committee.

Characterizing the effectiveness of the Inter-Agency Committee, the Task Force in Water Resources and Power reports:

"The task force believes that the Inter-Agency Committee has produced some benefits in recent years. The parent body and its field offspring have provided a mechanism for exchange of views, not only among the agencies but with the states affected. The whole device, however, has basic weaknesses, as the 1948 and 1950 studies pointed out. The committee's representatives were generally staff men, whose commitments could be reversed by the agency head. The committees could only act by unanimous consent. Moreover, it was futile to expect a voluntary organization to reconcile conflicts which are written into the policies and laws governing the constituent agencies. It was to be expected that each agency would fight shy of sharp criticism of the plans of another—unless its own prerogatives were invaded. That is what has occurred."

Generally speaking, however, these attempts to achieve lacking coordination and integration of activity have met with only partial success.

This is due to the fundamental weakness of the entire arrangement. There is virtually no effective central control, either by the Executive branch or in Congress, over the water resource development programs of the various agencies: Furthermore, since each agency functions under a different set of laws, limits are directly placed on the amount of coordination that may be achieved within the existing legal framework. Nonetheless, an accelerated pace in attempts to achieve coordination and integration is evident; primarily because of in-



Contour irrigation makes better use of water, as it sinks slowly into the soil

creased public pressure and the findings of various research bodies that have undertaken water policy studies.

EMERGING WATER POLICY

The question now arises as to the character of currently emerging national water policy. In the first place, it is generally agreed that the objective of any water policy should be to bring about maximum water resource development at the minimum cost. Since water is vital to the sustenance of human life, conservation and development of this natural resource is a legitimate aim for any society. Phrased in terms of economics, the development of water resources is also directly tied to the national scale of living. Since a high scale of living is a desirable social goal, maximum water resource development is one means for achieving this goal. However, since the expenditure of society's wealth is necessary for realizing maximum water resource development, it is essential that materials and energy be effectively combined in order that

society receive maximum benefit. To this end all policies must be directed.

Maximum water resource development cannot be defined in terms of absolutes. Currently emerging policies will be characterized by their flexibility and will provide machinery to achieve maximum water resource development in local areas. Local problems will be given greater consideration within a general organizational framework and detailed policies to meet a specific situation or problem may become a thing of the past.

Broadened scope is another characteristic of emerging policies. Water has many uses and is related to many types of human activity. The entire scale and standard of living in an area is raised by a water resource development project. An attempt is being made to evaluate and understand these phenomena and also to plan water resource development projects with an eye to fuller realization of related social benefits.

The general characteristics of emerging water policies, then, may be described as: (1) maximum development of water resources attempting to effectively combine the resources and energy of society; (2) flexibility of policy to better fit local situations; and (3) fuller realization of the broad social implications of a water resource development program.

In an attempt to indicate specific trends in water resource development policies, a national water resource program should be divided into three general discussion topics.

These are: (1) scope and manner of development; (2) fiscal policies; and (3) administrative machinery necessary for achieving program ends. Such division is entirely for purposes of convenience for admittedly the divisions are interrelated.

Future water resource projects will be multi-purpose in scope. Substantial evidence indicates that there is increasing recognition of the vital interrelationship existing between all phases of resource development. Such development is justifiable from both a social and economic standpoint, and for this reason water resource development projects will deal concurrently with such areas as flood control, hydropower, land treatment, pollution abatement, irrigation, reclamation, fish and wildlife protection, recreation, and provision of municipal water supplies. The problem lies in assigning relative importance on each phase of a total water resource program. Serious question has recently been raised as to whether or not all aspects of a multi-purpose project development should fall within the scope of federal responsibility. Since certain project benefits are essentially local in character, it is felt that local resources should be more fully utilized in order to realize these benefits. The conflict regarding division of responsibility in a multi-purpose project is, for the most part, still unresolved. Due to the natural interrelationships existing among the phases of water resource development, satisfactory division of responsibility is difficult to attain. While

greater local participation will be required, water resource projects will be viewed in totality; and the overall development of a project will probably take precedence over one phase that should not alone be constructed.

Concerning the manner of project development, the basin or large watershed approach would appear to prevail. However, while project boundaries will be broadly delimited by a river basin or large watershed, work activity will probably center around the small watershed within the limits of the basin. Such an arrangement is necessary if full project benefits are to be realized. Although the small watershed type of control has been used by the Soil Conservation Service since 1935, only recently has this approach gained general Congressional support. In combination with basin development which envisages large mainstem works for control and development, the small watershed complements and makes possible more effective control. Two worthwhile objectives are fulfilled by a combination of these approaches: (1) the many benefits of a water project are made available to more people; and (2) greater local participation allows small scale project modification to meet varying local conditions.

The second general area of consideration deals with fiscal policies in water resource development. This area may be sub-divided into (1) cost allocation; and (2) cost sharing. While considerable refinements of fiscal policy have already been made, both formulas for cost allocation and cost sharing have inherent weaknesses which tend to limit their effectiveness.

Cost allocation is more complex than cost sharing. Project costs are allocated among the various functions of a water resource development project in the proportion of benefits to be derived from each function. Costs are meaningful only when related to benefits; costs allocation proposes to examine each phase of a water project to ascertain that in each case benefits will be in excess of cost. The inherent difficulty in cost allocation is measurement, for neither benefits nor costs are easily measured. For example, it is generally agreed that most water resource development projects produce benefits attributable to recreation. Yet how are such benefits to be measured? What percentage of the total cost has gone into producing these benefits attributable to recrea-



New seepage irrigation on 80 acres of clover and pangola to remove surplus seasonal water. Deep well supplies dry season water through ditch

tion? Past practices have led us to consider only those benefits which can be reduced to terms of dollars and cents which, incidentally, do not include benefits attributable to recreation. Current practices in cost allocation center around a computed ratio of benefits to costs. This ratio determines to a limited degree whether or not the nation's wealth is being effectively utilized. The Jones Subcommittee describes the use of the benefit-cost ratio thusly:

"The ratio of benefits to costs reflects both benefit and cost values and is the recommended basis for comparison of projects. If the sum of all beneficial effects were compared with the sum of all adverse effects for a project, the ratio of the benefits to the costs would reflect the effectiveness with which all the resources were being used."

of all costs. The Bureau of the Budget and the Second Hoover Commission both recommend that local interest pay fifty percent of the capital costs of projects, as well as necessary rights-of-way, hold and save the federal government against damage suits, and costs of maintenance. Admiral Ben Moreel said in a speech at the University of Chicago referring to federal costs: "Under current practices, navigation is 98 percent subsidized, flood control 94 percent, irrigation 73 percent, and power about 40 percent." Increased local financial responsibility will be a characteristic of emerging policy.

Cost sharing generally hinges on a definition of "fair." Obviously what is fair in one case might not be fair in another. A "fair share" could be interpreted to mean many things. For example: (1) contributions, regardless of how small, should

Interior Douglas McKay states:

"This is what is meant by partnership. The idea is very simple. It is based on the concept of individual initiative with government cooperation. Because of the large expenditures required to assure that our power needs will be fully met, this department has encouraged state and local public bodies and private organizations to supply their own power needs and to share with the federal government in the development of water resources. Thus the federal government will be in a better position to contribute toward the cost of those necessary projects which, because of size or complexity, are beyond the capability of state or local groups to finance or which provide benefits of a broad public nature."

Thus the states and other local



Our national water resources are dwindling rapidly, as the magnitude of our water problems is increasing.



Many areas are learning that provision for adequate water supplies is an increasingly difficult problem

Cost sharing may be defined as the division of financial responsibility between the federal government and local interests in a water resource development project. Historically speaking, cost sharing has run the gamut from complete local responsibility to complete federal responsibility depending upon the time and upon the phase of water resource development considered. What costs should be properly borne by the federal government is still an item of contention, although it is generally agreed that local interests, since they are the chief beneficiaries of water resource development, should bear their fair share

be levied according to local interest's ability to pay; or (2) contributions should be made under certain minimums and reach a definite level before project construction can begin. Although the former could allow a "free ride," the latter could prevent development of a worthwhile project. Current thinking tends to adhere more closely to the former, although with the exception of recently authorized projects (since 1948) few local contributions are required under any formula.

The policy of the present Administration regarding cost sharing is characterized by the term "partnership." Former Secretary of the

interests are required to initiate as well as participate in water resource development. Local initiative and participation often constitute a test for necessity of project development. Also there is evidence which would indicate that greater use will be made of private capital.

Administrative machinery in water resource development constitutes the third and final area of consideration. From the present system must come order if we are to combine effectively the necessary factors to achieve maximum water resource development. It is generally agreed that there are too many agencies in water

(Turn to page 59)

DEADLINE BRIEFS . . .

Governor Luther Hodges, of North Carolina, has appointed a Fire Conference Committee to plan a state meeting at Raleigh on November 14. The members are Roger Wolcott, chairman, and president of the North Carolina Forestry Association; Fred Claridge, state forester; Don Morriss, supervisor, North Carolina National Forests; William Maugham, forester, Carey Lumber Company. Similar meetings are being held in Florida and Mississippi this month. Another is in the planning stage in West Virginia. All are an outgrowth of the Southern Forest Fire Prevention Conference in New Orleans last spring. . . . **Forest fire cost and who should pay it** will be appraised by a national syndicate of specialists—such as Stanford Research Institute, the Little Co., or MIT—as a result of a meeting last month in Michigan called by Forest Service Chief Richard E. McArdle. In addition to federal and state forestry representatives, the Forest Service pulled in some of the top brass of the forest industry for its ideas, and also leading educators. These included Dean Stanley G. Fontanna, School of Natural Resources, Michigan; W. F. McCulloch, dean, School of Forestry, Oregon State College; L. J. Freedman, vice president (retired) Penobscot Chemical Fibre Company; C. G. McLaren, vice president, National Container Corporation; Charles L. Wheeler, vice president, Pope & Talbot; Ernest F. Swift, National Wildlife Federation and Guy C. Jackson, Jr., president National Reclamation Association. Federal forestry collaboration with the state foresters had rough handling three years ago when the Congress all but eliminated it. The idea was that the states would get busy and appropriate more money for various forestry activities. Instead they descended on Washington and both Congressmen and Senators were soon asking sharp questions. Said Senator Aiken, of Vermont, "I get more letters about this than any one thing including Senator McCarthy." The curtailed monies were restored in part but resistance to the federal program continues, inspired in part by the resolution of the NLMA at Sea Island, Georgia, several years back. At the same time this resistance has been somewhat elusive, and the move on the part of the Forest Service was interpreted as an effort to pin down the thinking of industry's big men on some of these problems. The meeting was closed to the press (although participants were available to newsmen at all times). However, some of the associations were caught short when the questions began to come in. At the same time, some of the big wheels of these various associations were out at Michigan taking part in the meeting. In the past, the activities of the federal-state cooperative setup on fire might be compared to the fire companies in any American city. They try to maintain forest protection at a basic level—one which will avoid catastrophes. At the same time, this basic level isn't enough to insure intensive protection. For example, some companies are now paying out as much as 42 cents an acre for fire protection. This spells progress. But at the same time many other areas have merely the basic protection, and Container's McLaren, who gave fire protection a big boost in Wisconsin, blanched over the fact that almost half of Florida, where his firm now has holdings, has no protection at all. At

the same time, costs are mounting on everything and this is as true of the fire dollar as any other dollar. With the state foresters clamoring for more federal money (they contend the Forest Service is not living up to the spirit of the Clarke-McNary law) the Forest Service, in view of opposition to more federal assistance in other quarters, apparently is trying to find out where it stands on the matter, determine exactly how much the federal, state and private agencies should contribute to maintaining an efficient forest fire program. . . . **Forest Service Annual Reports**, discontinued two years ago on a trial basis by the Department of Agriculture, will be resumed this year. At the same time, misunderstanding apparently has arisen in some quarters over the fact that the department opposed Rep. Laird's bill (H.R. 10794) calling for annual reports covering the timber resources and operations on the 149 national forests. According to Acting Secretary True D. Morse, the department was fully in sympathy with the bill but recommended that it not be enacted because the legislative authority to publish reports is already in existence and such reports are actually being resumed this year. At the same time Secretary Morse suggested that the bill was limited in scope in that it called for detailed information on the timber resource only, and would have ignored the other multiple resources of the forests. "If an annual report of the nature contemplated by the bill were to be issued, it should bear on the water, range, wildlife and recreation resources of the national forests as well as timber," Secretary Morse said. The Secretary stressed that the department's authority regarding the contents of annual reports "should be flexible in order to best meet changing public needs." In his opinion, rigid specifications as required in the Laird bill "would not be in the public interest." . . . "Where it took definite action, the record of the 84th Congress on natural resources conservation was generally good," the National Wildlife Federation reported to its members last month. On the good side, the federation listed the Soil Bank, a new water pollution law, "long-needed reform on outmoded mining laws of 1872"; a program to improve the National Park System; elevation of federal fish and wildlife functions by creation of a new Assistant Secretary of Interior and reorganization of the Fish and Wildlife Service; legislation to release \$13½ million of federal-aid wildlife funds that had been previously tied up for 10 years; and revision of the Watershed and Flood Prevention Act. On the "dark side," the federation listed the following "sins of omission": encroachment upon and threats to the National Wildlife Refuges; neglect of recreational and wildlife resources of national forests; federal subsidies that encourage drainage of marshlands, an activity inimical to the best interests of wildlife; failure to secure adequate recognition of and protection for wildlife and recreational values in connection with federal river development projects. Major "black mark" listed was approval of the Bruce Eddy Dam on Clearwater River in Idaho, an Army Engineer project, that according to the federation would have eliminated spawning runs for fish and winter feeding ground for elk. This action by Congress was erased by the President when he vetoed the whole rivers and harbors bill.

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No Prison Riots Here

(From page 29)

the present time. However, forestry camps which were begun in 1944 have increased rapidly and plans are under way for a much larger program in the near future. Last summer, there were twenty-three honor camps in California, with a total population of over 1,200 inmates. Three of these were the Division of Highway's road camps, ten were permanent (year-round) forestry camps operated by the California State Division of Forestry and ten were temporary (summer only) forestry camps, operated by the United States Forest Service.

The temporary camps consist of housekeeping tents stretched on wooden frames and with wooden floors. There are usually four cots to a tent and one wood-burning heater. These camps usually open in late June and remain open until the rains and snow bring an end to the fire season in October or November. Incidentally, it is quite a sight to see a snowball fight between a bunch of inmates, many of whom have never seen snow before.

The permanent camps are wooden structures similar to our armed forces camps. In addition to the barracks, both the seasonal and permanent camps have showers, quarters for the freemen, a mess hall, a kitchen and a canteen office. There are signs tacked to trees around the camp proclaiming camp limits. There is no other barrier.

The average forestry camp has around 55 men—50 laborers and a five-man kitchen and camp maintenance crew. The Department of Corrections supplies four officers and one supervisor for operation of the camp. The Forest Service or state agency supplies the crew foremen. The crews are usually eight or nine men.

The usual day begins about 6:15, when the bull-cook rings the first gong. There is the usual grumbling as sleepy men scratch themselves and head for the showers. Then one becomes excited and points out a doe and a fawn in the meadow a hundred yards away. "You don't see things like that in the joint," he says, reverently referring to San Quentin.

There have been several head counts during the night and there is another one at the breakfast table. The chow line again resembles the

ones familiar to our armed forces. Compared to that served in prison, the food is quite good. It has to be. These men have a day's work ahead of them. The inmates are not assigned seats but may sit at any of the tables except two. One of these is marked "Bulls" and the officers sit here. The other is marked "Rangers." To an inmate, anyone working in forestry is a ranger.

At 7:30 the men are counted again as they climb onto the trucks to ride to the job. From the time the trucks leave the camp until they return that night, the inmates are under the supervision of forest personnel. The officers do not go into the field with the men but remain to supervise camp. The job and the location vary somewhat from day to day for a single camp, due to the fluctuation of the fire danger. One day the inmates will be pruning pines up north, and the next they will be piling brush and repairing roads in the southern end of the forest.

The work is hard at first, but the men toughen up fast. Most of them would rather work in the field than in camp in spite of the pay differential. "I sleep better nights," one of them explained. He was due to

be released from camp soon and was a little excited over his approaching parole date. The majority of honor camp inmates are to be paroled within eighteen months.

In addition to the honor camp fire crews, there are specially trained crews at the various institutions who are available on an hour's notice. Last year, for example, inmates spent over 260,000 man hours fighting fires, not to mention the weeks spent in reducing fire hazard. As the United States Forest Service's fire control office put it: "The great advantage of inmate labor is the availability of trained crews for immediate dispatch to fires. Pickup crews of freemen, at best, fall far short of our inmate fire-fighters."

The honor camp system was started originally to reduce pressure on overcrowded prisons. It has had a limited success in this field. San Quentin, for example, was designed as a 2,700 man institution. At the present time it has a population of 4,400 inmates. But in the field of rehabilitation, the success has been most gratifying. Why are camp men so much better prepared to return to society than others?

Most of us are probably unaware of just how dynamic our society is. We find old photo albums full of quaint pictures of ourselves in outdated costumes, and we are vaguely aware of a gradual change with the passing of time. But what of an inmate completely removed from this society for 10-15-20 years?

Captain L. W. Thompson, Chief Camp Supervisor at the California State Prison at San Quentin for the last eleven years, recalling past experiences with men he had released in downtown San Francisco, said: "I watched one man stare at a window display for forty-five minutes trying to comprehend the great changes that had taken place." One prisoner escaped from San Quentin only to call up from San Francisco to come and get him. Things had changed too much. He couldn't take it.

This is exactly the sort of situation the honor camp system alleviates. In the camps, the men work from eight to five for a boss who shows them what to do and then sees that they do it. The men commute from camps to work in busses and trucks. They have Sundays and

FFYRE

"IT IS ORDERED BY THIS COURTE and authority thereof,

That whosoever shall kinde any fyre in the woods or grounds lying in Common, or inclosed, so as the same shall runn into such corne grounds or inclosures, before the tenth of the first month, or after the last of the second month, or on the last day of the weeke, or on the Lord's Day, shall pay all damages and halfs so much, for a fyne, or if not able to pay, then to bee corporally punished by warrant from one magistrate, or more, as the offence shall deserve, not exceeding twenty stripes for one offence; provided that any man may kinde ffyre upon his owne ground, at any time, so as no damage come thereby, either to the country or any particular person; and whosoever shall wittingly and willingly burne or destroy any frame, timber, heune, sawne, or riven, heapes of wood, charcoale, corne, hay, strawe, hampe, flax, pitch or tarr, hee shall pay double damages."

(A very old law relating to fire, taken from the old BLUE LAWS and CODE of 1650 of the General Court of the State of Connecticut, as adopted by the Towns of Windsor, Hartford, and Wethersfield of that state in 1638 and 1630.)

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In spite of the facts stated the Attorney General of the State of Pennsylvania has instituted action against Musser Forests because of alleged violation of the reforestation statutes.

We can only conclude that the case of the State of Pennsylvania against Musser Forests is politically inspired. The most that can be charged is failure to file Forest Tree Plantation Reports on mimeographed forms furnished by the state. Musser Forests did submit reports but it is an obvious fact that mimeographed forms furnished for this purpose are entirely unsuitable for so large an operation as the planting of millions of trees on various tracts scattered over a large area during the short planting season.

Although the Pennsylvania Dept. of Agriculture has twice attempted to revoke Musser Forests nursery certificate this spring, and widespread but misleading publicity has been given to these actions, the courts, on both occasions, have acted promptly to reinstate the certificate.

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holidays off, overtime for fires, movies, and, most important of all, a limited contact with the outside world. They are transported through towns where they can see the changes taking place. They fight fire side by side with firemen. They are away from the monotony of walls, concrete and steel. There are no fences, no guns, and little regimentation.

What led to the great series of riots during the period 1951-53? There were many causes suggested, but the phrase that appeared most often was "enforced idleness." With the rise in prison populations following World War II, already overcrowded facilities were pushed beyond all limits. Along with this cell shortage came an ensuing lack of employment for the inmates. The monotony of spending from twenty to twenty-two hours in a cell, year-in and year-out can build up tremendous pressures. Most of our prisons have little work for inmates to do. It is estimated that 40,000 of the nation's 170,000 inmates are in practically complete idleness.

The danger of another epidemic of riots has not been removed. As Austin H. MacCormick, professor of criminology at the University of

California and, at one time, assistant director of the United States Bureau of Prisons, pointed out: "The prison world is in a period of uneasy calm at best. The major characteristics of our prisons which formed the basis of the riots have not materially changed. . . . For every prison that had a riot in the 1951-53 series, there were a half-dozen that had just as much reason to expect one."

Prison industries have found much opposition from public groups, on the grounds that they compete with freemen. The restrictive federal and state legislation that has been passed in the last twenty-five years has thwarted most attempts to provide inmates with labor (despite the fact that prisons produced over 138 million dollars worth of war goods during World War II).

Honor camps are providing the answer to inmate idleness without competing with free men, and much of the work they are doing could not be done without this source of labor. Reforestation, for example, is often impractical without this low-cost source of labor.

The California Department of Corrections is expanding its program as rapidly as funds permit. California's lead is being followed by other states. But, as always with a new idea, the program is meeting opposition from the traditionalists and from the uninformed public.

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D'Ewart To Study Drought Conditions

The appointment of Wesley A. D'Ewart as special representative of the Secretary on drought matters has been announced by Acting Secretary of Agriculture True D. Morse. He will work with Kenneth L. Scott, Director of Agricultural Credit Services of USDA, who is Chairman of the USDA National Drought Committee.

"Spreading drought conditions are of great concern to us," Mr. Morse said. "Mr. D'Ewart's appointment is part of an increase in staff to assure prompt and full attention to drought assistance requests. We are glad to welcome Mr. D'Ewart back to the Department of Agriculture, where he formerly was special assistant to the Secretary. A ranch owner, he has a wide knowledge of livestock and agricultural conditions, especially in the area now affected by the drought."

Mr. D'Ewart and Mr. Scott later this month will go to Texas, where Governor Shivers has requested a cooperative federal-state emergency hay program. Texas now has 152 counties designated as drought disaster areas.

opening of a new honor camp, a small-town paper publishes an editorial entitled, "Convicts Bad For Community." After the camp is established, the citizens begin to see the work accomplished and observe the inmates themselves.

"Why, they're just like people," an astonished lady remarks. It is not surprising that this observant housewife noticed the similarity. They walk upright, speak a language somewhat similar to English, (San Quentin is "the joint," they didn't break the law, they "fell"); but they can be readily understood. They speak of home, the wife and the kids. Some of them have college degrees, many did not complete grammar school. Their taste in music runs from Saint Saens to Hank Williams; in literature from Dostoevsky to Spillane.

Two Folsom men burned to death in a forest fire, and a small Sierra town paid for the funeral, in an attempt to partially console the bereaved relatives. Sorta like people.

Not all men chosen for camp were sent to prison for "minor" crimes such as check-writing and book-making. About 30% of the men are in for crimes of violence: homicide, aggravated assault, robbery and rape. A man's record at prison rather than his crime is considered. In addition to an excellent prison record, the man must have expressed a desire to go to camp. Only minimum security or class "E" prisoners are considered.

In Michigan, the camp program is catching on rapidly. Beginning in 1948 with an experimental camp, the program has expanded to nine camps with over 750 men. Many requests have been received by the camp program personnel to allow local softball teams to play the camp teams on their local diamonds. The clergy in local areas took the lead in accepting inmates assigned to these camps. In several camps the inmates are taken to local churches for worship. Services are also conducted regularly in each of the camps.

Our prisoners cost us 200 million dollars a year. For this, we get facilities to lock up and rehabilitate some 170,000 men. Ninety-five percent of these men will return to walk beside us in our society. What their attitudes will be when they return largely depends on what happens to them while they are in prison. Twenty years of idleness is a poor education for that return. Sixty percent of those released will

return to prison within five years. The honor camp system can reduce that figure as well as the 200 million dollar cost. There is a saying about "a man's debt to society." Maybe, then, society owes a debt to the man, a chance to make up for bad environment, hard times and even weak character.

The honor camp system has proven itself in California. It is doing so today in Michigan, Wisconsin and Oregon. With a little education it can do it in your state.

But the people learn slowly; the

old taboos remain. Recently a tourist was stopped by a flagman in a red jacket. The road was being repaired by an inmate crew and the tourist was obviously ill at ease. He turned to the flagman:

"I'm sure glad to see you on the job," he confided. "These criminals with no guards make me nervous. I don't think these San Quentin men are trustworthy. Do you?"

"Oh, hell, no," the flagman agreed emphatically. "You've got to watch them guys. I'm a Folsom man myself."



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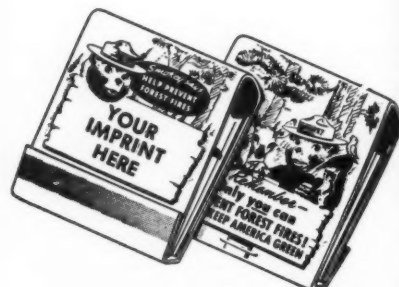
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A Test Pilot Takes to Tree Farming

(From page 15)

trees were growing so well it seemed a crime to uproot them."

Shortly after acquiring the land, Michael attended a church conference and talked with a previous acquaintance, Dave Weyerhaeuser of Tacoma, Wash., the man in charge of land management for the vast Northwest holdings of the Weyerhaeuser Timber Company.

In the course of their conversation, Michael told of having acquired logged-off land. Weyerhaeuser suggested that he investigate the possibility of operating the land as a private tree farm to increase its value.

As a result, Michael got in touch with the Industrial Forestry Association, an organization sponsored by the West Coast lumber industry to encourage the establishment of private timber reserves where trees are grown as a crop. The Seattle district forester for the association, William Tinney, visited Michael's tract to perform a first-hand inspection of the stand. Upon recommendation of the forester, Michael's application was submitted to the board of directors of the association for consideration. On the basis of the forester's report, the land was granted certification and Michael set about tree farming in earnest.

The major advantage of certification to Michael is that he can call on the assistance of an expert forester at any time. With the help of the association forester, Michael has been able to work out the long-range timetable which will enable him and his children to realize the greatest possible return from their "evergreen annuity," as tree farms often are termed.

The district forester is available for consultation on a multitude of subjects, ranging from fire protection methods which provide the tree farmer with the greatest possible protection for the least possible expenditures to procedures for making an inventory of tree farm assets. Such inventories require consideration of such factors as probable values of merchantable timber, access, trespass potential, rehabilitation problems, vigor of tree growth, salvage values, snag hazards and local forest fire detection and suppression facilities. When harvest time comes, the district forester of the certifying agency is available for

suggestions bearing on the owner's proposed cutting practices. Through the study of literature supplied by the association, Michael now is aware that the mere age of the timber itself does not dictate the harvest time.

Cutting schedules are worked out on the basis of existing markets, logging costs, the income tax position of the owner, access road development costs and the volumes of timber available as to species location and concentration.

While the staff forester is available to discuss harvest plans, whether simple or complex, the owners must make the final decisions. The district forester also advises on whether or not plantings are required, and, if they are, what plantings would be best suited to a particular tract. Thinning practices and stand improvement procedures also are recommended by association foresters on the owner's request.

After obtaining certification, Michael spent a good many week-ends putting into practice the initial recommendations of the district for-

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ester. His efforts attracted the attention of the King County Forest Committee, an organization representing all forest groups in the county in which Seattle is located. When one of the county school districts requested assistance in teaching youngsters about tree farming and the principles of forestry, Michael offered to make his farm available through the Forest Committee as a "living textbook."

The first group of 700 students visited the Michael tree farm in 1952. That year, as in subsequent years, the University of Washington School of Forestry, federal agencies and the lumber industry provided trained foresters to act as guides. In 1953, other school districts joined in the program and 1,100 junior high school pupils made the tour and learned about forestry from experts. By 1956, the number of pupils to participate in the now-annual May event, Tree Farm Field Day, had climbed to 1,800.

Looking at the tree farm from the investment standpoint, Michael is the first to agree that so far the tract has not begun to return regular dividends. However, the land is paying its own way in several ways. First, thinnings from the alder stand provide the Michael family with a

supply of fireplace wood all through the winter. With alder firewood selling for \$20.00 a cord in Seattle, the thinnings are worthwhile.

Through the U.S. Department of Agriculture Soil Conservation Service, Michael is participating in a federal cost-sharing plan for thinning and pruning crop trees. The federal program is intended to encourage sound management of small timber tracts, and provides payments at a current annual rate of \$21.00 per acre for thinning and pruning operations. The payments for stand improvement are limited to a maximum of 10 acres per year, but the money Michael receives for participating in the program meets the small annual tax bill on the tract, pays for required tools and helps to defray transportation costs to and from the tree farm. The Michael tract is inspected annually by the regional forestry supervisor for the Soil Conservation Service before payment is made.

Michael has found that youngsters make the best Douglasfir pruners. They can skin up to the proper height using the lower branches as steps and then prune their way back down to earth. The firs are pruned to a maximum of one-third of their total height, up to a maximum height of 18 feet. The 18-foot maximum is dictated by the desired products, which are a saw log 17 feet in length or two eight-foot peeler logs for making plywood veneers. To trim smaller trees to more than a third of their overall height stunts their growth.

It is not profitable to trim fir with a trunk diameter greater than eight inches. This is because the purpose of pruning is to provide knot-free logs suitable for use as peelers. The knots in logs eight inches in diameter or smaller are no problem in plywood peelers, because eight inches is the diameter of the core left after the veneer has been turned off the log.

The alder cannot be pruned, since alder bruises easily and the bruises allow disease to enter the wood and eventually kill the tree. To hasten the growth of the straightest and most vigorous alders, Michael thins the stand by girdling unwanted trees with a special knife that cuts a groove through the bark into the heartwood.

For all its potential as a source of income for himself and his heirs, Michael still regards his tree farm as being primarily a place for family work and play.

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National Forest Summer Homes

(From page 21)

ment. The actual location of all buildings must be approved by the officer in charge.

2. The design and construction of all summer homes must meet minimum standards specified by the Forest Service.

3. Latrines and garbage pits must meet state law and national forest regulations.

4. Summer homes are for personal and not for commercial use. Sub-lease must be approved by the forest supervisor and will not be approved as a general practice.

5. Summer homes may only be sold or transferred with the approval of the forest supervisor.

6. Summer homes are recreational—not permanent—residences.

7. The keeping of livestock or chickens is prohibited on summer home areas.

8. The premises and improvements must be maintained in an orderly condition and in a good state of repair.

9. All national forest regulations and state laws as to fire protection, fish and game, etc., must be observed.

Most summer home sites are served by simple spring water systems installed by the Forest Service. Nearly all are located on forest roads that connect with paved or improved highways.

In many instances it is unnecessary to import building material. Sometimes arrangements may be made with the forest supervisor for the cutting of trees to be used in constructing log cabins. This practice reduces the overall cost of a summer home considerably.

To preserve the forest's natural appearance, no homes are allowed within sight of highways or lakes, along fishing streams, near public use areas or scenic attractions. With so many seeming restrictions and conditions, it might appear difficult to locate satisfactory home sites. But the forest men know their jobs; and fortunately, summer home sites do not require large areas. Each year, more and more sites are surveyed and plotted in attractive country with good forest cover. Many are within easy walking distance of excellent recreation areas.

The Forest Service tries to help

all who wish summer homes on national forests. However, the location and surveying of summer home areas is just one of the many duties of national forest men so, it is not always possible to have a large supply of home sites on hand.

If you desire a national forest summer home, get in touch with the supervisor of the particular national forest in which you are interested. The Forest Service advises, "If summer home sites are available on that forest, the forest supervisor will arrange for an inspection of the area, and the prospective summer home owner may take his choice of unoccupied lots. If no summer home lots are available on that national forest, the forest supervisor will, if practical, direct the prospective summer home owner to another national forest on which lots are available."

Autumn weekends are especially desirable times to investigate the possibilities of a national forest summer home and to plan for future erection.



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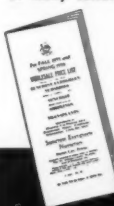
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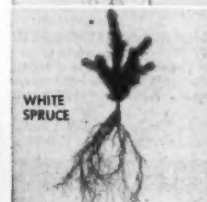
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Landownership Committee

(From page 7)

Department of Water Resources, the U. S. Soil Conservation Service, the Chairman of the California Assembly on Natural Resources, the State Bureau of Land Management, the State Mining Board, a committee supervisor, the Associated Sportsmen, the League of California Cities, the Southern California Watershed Fire Council, U. S. Forest Service, the State Division of Beaches and Parks, California Redwood Association, a private forester, the Audubon Society, the Department of Fish and Game, California Wildlife Federation, the Nutrilite Foundation, the California Forest & Range Experi-

ment Station, Western Pine Association, Wild Game & Public Use Committee, Range Committee of the University of California, County Supervisors Assn. of California, the National Park Service, Western Forestry & Conservation Association, a consultant on water, Farm Bureau Federation, another division of forestry, California State Grange, California Forest Protective Association, State Chamber of Commerce, Western Lumber Manufacturers, California Wool Grower's Association, the Western Mining Council and others.

Each representative of these interests was called upon for expression of his or her opinion on the scope of the committee's proposed program and to offer any recommendations that might be pertinent. It was surprising but almost without exception every one expressed the opinion that provision should be made for recreation, not only for the people of California, but for the ever-increasing number of tourists who throng the beaches, the valleys, mountains and Death Valley.

The objective of the study and the work of the committee was to classify, analyze and dovetail the various jig-saw pieces of landownership in the state so that there would evolve a picture of the ownership of forest, range, watershed and other conservation lands which would contribute to the economic health of the state. This envisioned an analysis of the relative effectiveness of the different types and patterns of landownership in obtaining such objectives as sustained timber production, optimum water yield, ample opportunities for recreation, sustained livestock production, orderly exploration and development of mineral resources and community stability, including the tax base and contribution in lieu of taxes.

The committee served its purpose by proposing an outline for such a study in landownership in California. The actual survey will be made by Director, Dr. Samuel T. Dana, Dean Emeritus, School of Natural Resources, University of Michigan, and Myron E. Krueger, Forester, Sebastopol, California. Dr. Dana will be the chief of the study.

The landownership study in the first project state, California, is scheduled to begin in November.

Lightning—Still a Troublemaker

(From page 25)

Clearwater Association territory. Bert Curtis recalls that eleven miles of wire got so hot that wisps of moss clinging to it fell blazing. Smokechasers beat a trail along that line putting out the forty starts.

During the forest fire season in most of the United States, man himself is the principal target of the keep-greeners. Nine out of every ten fires start from human carelessness.

Not so in the Northern Rockies. Here lightning is the culprit, touching off on the average eight out of every ten fires. Man's record out here could be lily white, yet timber defenders would have to put out an average of 1,200 fires every season.

So constantly menacing to trees in the home land of the nation's largest and most valuable stands of white pine is the electrical bad boy that rod protection once was seriously proposed. Placed atop the tall peaks, the lightning rods would drain off the electricity before it could hurt the slopes carrying the best timber.

Here's a land where lightning occasionally shows off. Five times during one storm, smokechasers in Clearwater Association territory went back to the same spot. Five different flashes had started that many different fires within a few hundred square feet.

Everyone who has been in a lookout tower when the lightning is flying knows that some storms couldn't do a better job starting fires if they dumped gasoline instead of rain. Then there are others that pack the explosive wallop of a junior-size atomic bomb but not a single match.

What some woodsmen call "orange" lightning may explode a tree into kindling without even scorching a splinter. Bolts of what they commonly call "white" lightning may do very little physical damage to the tree itself while turning it into a torch.

Forest researchers have found that thunderstorms have different heartbeats. These beats have been recorded on tape. They are wiggly lines, just like the electrical record of the human heart.

"Right now we are where medical science was twenty-five years ago recording the human heart beat," commented one of the forest researchers.


"Doctors knew they could make

the heart record itself, but it was some time before they knew exactly how to read those wiggles and how to use them in prescribing treatment."

What research hopes for is some kind of a mountain top electrocardiograph for thunderstorms. Heartbeats from the storm would reveal whether it was a fire-starter or one with a lot of noise and no matches.

Spearheading current thunderstorm research is "Project Sky Fire," nickname for the Region 1, U. S. Forest Service study, in which General Electric and the Muntalp Corporation are collaborating. Men on this project, headed up by Jack Barrows, director of the fire control research center for the region at Missoula, Montana, realize that before they can do very much about pulling the stingers from thunderstorms they must know more about why storms have lightning, some don't and why some lightning is dangerous and some relatively harmless. Radar, being used to follow thunderstorms from their breeding

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grounds to the forests where they put on the show, is helping get that background knowledge.

From thirty years experience in the Clearwater woods, Bert Curtis is convinced that lightning has a strong preference for white fir.

"If you had a hundred strikes in clumps of trees with a white fir at the center, even a scrawny one, I'd wager that in ninety-five of those cases the lightning would pick the fir," he declares.

Just when you get ready to accept something as a basic rule, along comes an exception. Here it is Smith Ridge. For some mysterious reason, lightning passes the firs on this ridge and goes after the white pines.

"Without ever starting a fire, lightning is costing the lumber industry a lot of money on Smith Ridge," Curtis reports, "because of its puzzling and persistent appetite for the finest of the white pines."

Just goes to show you can't depend on lightning.

Since forest research is prying into the private life of thunderstorms, it might well broaden its study to include a highly important point raised by an unhappy smokechaser on the Clearwater territory. Friday evening he had everything arranged for a week-end in town. A storm moved in and all hands were ordered out.

"Why is it," he grumbled, "that the worst thunderstorms always seem to come on weekends?"

**Science and Mythology
Manage a Forest**

(From page 31)

nificance because of the inter-weaving of spiritual with material values. Harvesting of the products of the forest, the roots and berries, was preceded by significant religious ceremonies," Delaney explains. "The forest was revered in the feeling that the earth was the mother and the trees were the mother's hair or covering, and neither were to be destroyed or injured.

"This pattern and this sense of values, diminishing in intensity, has continued to the present time," Delaney says.

Change in the forest since the signing of the United States treaty with the Yakimas and their 13 allied tribes in 1855, has been limited. A forest fire destroyed a por-



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tion of the northwest corner in 1918. Also destructive was the epidemic of the pine butterfly which centered in the Cedar Valley region and "destroyed hundreds of millions of feet of ponderosa pine over a hundred-thousand acre area during the latter part of the last century." Some of the older Indians recall clouds of these small white butterflies during the epidemic. The area today is heavily restocked with young pines, seeded by those which survived.

But no trees were cut. The chain saw roars today where—until 1944—only the moccasin trod and the loudest sound was an occasional shot.

Older Indians would not allow the trees to be sold. In 1941, however, the tribe in a General Council of June 20, gave consent to commercial utilization and development through a sales program.

In 1948, when Delaney came to Toppenish from the regional office in Minnesota where he was assistant regional forester, the sales program of mature timber was under way. The first sale had been made to the Cascade Lumber Co. of Yakima in 1944; a second sale to the same company occurred in 1945. These were small, involving 9 million feet of ponderosa pine timber on 2600 acres of tribal land, and at low stumpage rates of \$2.75 per M feet B.M. on the first sale and \$3 on the second. Cutting under these contracts was completed in 1946.

In August 1948, when sale was made of the Summit Creek Logging Unit, a major timber sales program got under way. Values had increased greatly by then. "At present dollar values, receipts will continue at about the 1954 level, but annual cut will be increased by a few million feet," Delaney says.

Timber sale income is now a major source of tribal revenue and has enabled the tribe to develop and finance activities of increasing importance. "Totals shown for timber sales are gross," Delaney says. "We take 10% for administration—including even fire protection—and that more than pays the costs. The Indians pay costs on this entire program; WE ARE NOT COSTING THE TAXPAYERS ANYTHING."

What is left over, out of the 10% withheld, goes into "miscellaneous receipts" and there loses its identity. "We're putting back more than we get out," Delaney says.

"Timber harvesting and forest management are conducted under the principles of sustained yield.

Trees are marked for cutting by technical foresters by the selection method which removes the old mature and weak trees and leaves the younger thrifty trees to stock the land. Under this method of cutting all forest values, including that of the watershed which is of increasing importance in irrigating the potentially rich tillable lands of the valleys are fully protected.

"The earth remains clothed by the forest, and the Indian owners and foresters have a common objective designed to prevent either injury or destruction to the earth or the forest," Delaney says. Thus science and mythology work together to accomplish a common goal.

Delaney points out that local operations include spraying sagebrush in some areas, but that spraying is not effective for the pine beetle. The best way to combat that is, primarily, to convert an old forest into a healthy forest condition. "From a beetle-susceptibility standpoint, we're making salvage cuttings designed to remove 'high risk' trees," Delaney says.

The agency maintains 3 primary fire lookouts and 2 additional lookouts during emergency periods. Some fires each season originate from lightning—sometimes as many as 40 small fires from a single storm. But man-made fires are negligible because travel through the area is restricted to members of the tribe or to whites who are there on valid business (logging or grazing stock) or who are accompanied by tribal members.

"Some years we have only 30-some odd fires a season, and we always catch them early," Delaney says. There has not been a major fire since 1948.

Fire control in the early stages is particularly important since the forest encompasses 2 wild and roadless areas totalling 153,000 acres. Many

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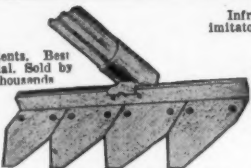
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of the existing roads are merely fire trails, throughout the forest.

Alex Saluskin, who has been for many years secretary of the Tribal Council and who is the son and nephew of hereditary Yakima chiefs, said, on a recent trip through the forest: "We want our people to keep the land and to keep it in timber. However, much of the timber is ready to be cut or is infested with beetles and should be cut in order to save what is good."

Saluskin said that a 30-year program is being planned, in cooperation with Delaney's staff and state forestry personnel. A cutting program which would begin at Klickitat Ridge and go slowly both north and south is proposed. Within 30 years certain areas would be weeded or cut and timber would be growing again on a sustained-yield basis.

Some of the individual Yakimas have timber allotments; the rest of the forest belongs to the tribe, and income from it is shared evenly on a per capita basis each year. "The Tribal Council has power of attorney to act for the tribe, and from this annual income we distribute the individual portions," Saluskin says. "It is from such sources that Indians receive income, not from government 'doles' as many persons erroneously imagine," Saluskin says.

Delaney describes further the legal aspects of this timber management: "We have this situation: by law we must have the consent of the Indians before selling timber. On tribal land, the Tribal Council must consent; on individual allotments we must have the owner's consent.

"On the other hand, they can't

do anything without our consent, either, for it is trust property and we are the trustees.

"In this we work closely with the Indians. The Tribal Council has a timber committee which goes over the ground with us before any proposal is submitted to the Council. Antoine Skahan has been chairman of this committee since it was begun in 1948. William Winnier has also been on it since that time. Walter Cloud and Wapt Bassett are the other 2 members at present. The committee is reorganized every 2 years when the Tribal Council is reorganized (by vote of the Tribe's General Council)," Delaney says.

Delaney employs the same practices which the Forest Service does, but some are intensified more than others. The unusual stands and uneven terrain pose some problems singular to this part of the country.

"We cruise; make 'stand composition studies'; then we develop marking rules that are specifically based on the character and composition of the stand to which applied.

"We may have 6 or 8 different marking rules within one sales unit, in order to cover the different conditions," Delaney says.

The advantage Richard Delaney and his staff have is that they are starting with a virgin forest condition, with no past man-made mistakes; they can "start at the beginning," with the best modern practices. Delaney has, in addition, that human understanding which appreciates the beliefs of his Indian friends and makes it possible for science and mythology to work together harmoniously in forest management.

Missouri's Forestry Camps

(From page 18)

cussed characteristics used in identification. Following the planned pattern of balanced classroom and open air sessions, Dr. McDermott took his class into the woods for a grass roots study that ended with an oral examination.

A key feature of the University Forest experimental and educational facilities is a complete sawmill used to process timber cut in normal forest management and used for research purposes. As might be expected, the mill became a center of interest for the boys in the summer camp. In the fourth day of their

studies, each youth was instructed in sawmill care and operation. Here many of the boys sawed their first logs, and others, who were familiar with mill operations in their home areas, were briefed on safe practices recommended by the forestry specialists.

In their early studies the boys were taught some of the basic principles of estimating timber. Each boy was furnished a blank stick which he converted into a cruising stick for measuring tree diameters and heights. On a previously cruised plot, where the trees have been

marked and numbered, McCormick explained some of the factors in timber management as a farm crop and demonstrated the use of tally sheets, cruising sticks and other forestry instruments. The boys were then required to measure and tally all of the trees on the study plot; and, later, in classroom review, each used his data to compute the board foot volume on the plot. Finally, the young students were guided in the preparation of a simple management plan for the area.

During their logging session, the boys were taught the use of scale sticks; and each one scaled the logs cut during the session. At the sawmill, the logs were cut and the group was given an opportunity to check their log scaling against the mill scale. Most of their cards checked within five or ten board feet of mill scale, according to McCormick.

At the end of their period on milling, Paulsell demonstrated the proper stacking of lumber and pointed out how the market value of native lumber harvested on their farm woodlots can be increased by employing approved processing methods.

Since research represents a large portion of the forestry activity carried on the year round at the camp, the boys were introduced to long-term studies in progress at the University Forest. They were shown a variety of instruments in the camp weather station, one of the most complete in the state and, in fact, in all of the midwest. Here key research in soil moisture studies has been carried on for more than five years and extensive new projects are planned.

On their last full day in camp, the boys joined in a two-hour session on farm woodlot management. Their instructor, Gus Hoyer, conducted the group over fire-study plots where they could observe the effects of burning on tree growth and forest litter; and on the soil structure itself.

The conservationist emphasized the losses in potential tree growth and linked the burning damage with declining wildlife populations, soil erosion and destruction of organic matter that should be present to restore tree and pasture growths. In simple language he presented the story of forest management geared to the needs of the average Ozark farmer.

In the camp's closing assembly, at the end of five days in the woods, McCormick quizzed the boys with an original game of "educational baseball," in which correct answers to quiz questions were scored as "bases." Guest authorities present were amazed at the amount of forestry information and wildlife lore absorbed by the teen-agers as revealed by their response to the quiz.

All in all, the entire program was scaled to measure for boys, but thoroughly spiked with vital information. It has proved to be a capsule course in fundamentals presented in a manner that turns the typical teen-ager's practiced nonchalance into enthusiasm and promises to stimulate a prolonged interest in forest conservation. What it will mean in future years remains to be seen, but it appears obvious now that the youth training may yet turn the trick and overcome Missouri's most serious forest problems.

Encouraging Start On AFA Studies

(From page 23)

limits of the study should be clearly defined and the study done well within these limits.

Six principal points were developed from this discussion that should receive additional emphasis in the study plan. These were as follows:

1. Population trends.
2. Interstate and intrastate problems.
3. The study should serve as a guide for future legislative study and action.
4. Owners of wild lands have a responsibility for watershed protection.
5. There is an increasing demand

for ample recreational facilities.

6. The advisory group should consider the findings and discuss the results at a future meeting before the study is finally concluded and the results published.

The meeting of the advisory group then adjourned and the committee and the sub-committee, composed of Chairman Nelson, Dean Dana, and Myers convened to revise the tentative outline to include the above points. The third and final meeting was scheduled for 8:30 a.m. on July 27.

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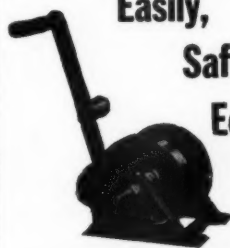
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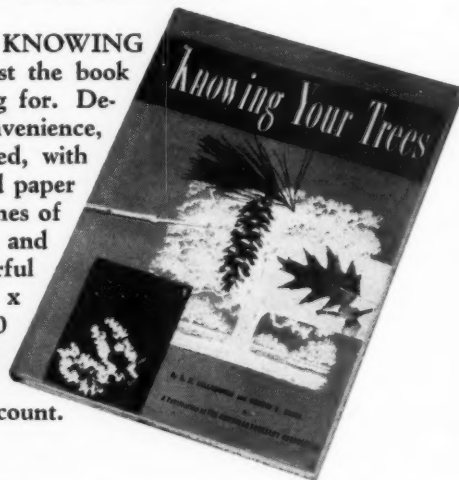
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9-56

Third Day of Committee Meeting, July 27

The meeting convened at 8:30 a.m. with Chairman Nelson presiding and all members of the committee present. The sub-committee, composed of Chairman Nelson, Dean Dana, and Myers, presented a revised outline for the study of Landownership in California based on suggestions and comments received from the advisory group on the previous day. The committee then went over this revision carefully making only nominal changes and this final draft was approved by the committee. (For the outline for the Study of Landownership of California, as approved by the committee, see page 7.) The committee then studied a proposed budget for the Landownership Study Committee, including salaries and subsistence for the study director and assistant to the study director. Myron Krueger was selected as assistant study director to work with Director Dana. Staff mileage was approved at 8 cents a mile plus storage.

The committee then discussed a possible second meeting with the advisory group present. It was the opinion of the group that this could likely be held in March or April, 1957; and that a full committee meeting would not be called again because of the expense involved. Likely, Chairman Nelson, Dean Dana, and Krueger could meet with the advisory group and that would be sufficient.

Publication of the findings of the study was next discussed. It was the opinion of the committee that the findings should be published in an attractive form, and a limited number distributed to interested individuals. The possibility of cooperative assistance in publishing these findings should also be fully explored. In addition, when the findings were published, interested groups might want to purchase copies for further distribution and it might be well to explore this matter at the appropriate time. Chairman Nelson then instructed the committee members that their expense accounts should be forwarded in quadruplicate to Mr. Fred Hornaday, Executive Vice-President, The American Forestry Association for payment. It was agreed that transportation expenses would be figured by all committee members on the basis of air round trip.

The meeting adjourned at 12 noon on July 27.

Our Evolving National Water Policy

(From page 41)

resource development. However, when faced with the task of cutting and consolidating agency activity, the problem takes on greater proportions. From a realistic standpoint, it is highly doubtful that any of the agencies currently dealing with water resource development will be abolished. Nor will many of them surrender functions in water resource development, with the possible exception of those agencies operating on the outer fringe of project development.

Where then is the outlook for integrated and coordinated activity? Although little may be done at the agency level, recent proposals have gained favor urging the creation of a super-agency over the regular agencies dealing with water resource development. While there is little agreement concerning the make-up of this agency or its specific duties and functions, it will probably be appointive and exercise review power over proposed agency projects. It would also enforce uniform standards and practices and represent the agencies to the Congress.

A few have recognized the possibility of integration and coordination at the project level. Utilizing the basin concept, integrated and coordinated activity stands its best chance at the local rather than the national level. Within the large watershed, uniform standards can be set and yet allowances made for local problems using small watershed,

drainage, or irrigation districts. Integration is easier to achieve on a small scale than on a national scale. With effective participation by the local interests, (which is now being demanded) coordinated and orderly development is more likely to take place. A hopeful development along these lines is illustrated by the small projects legislation that has been passed, or is being considered. Public Law 566, of 1954, gave Agriculture the authority to finance locally-initiated small projects which were designed for flood control purposes. This act, which came largely as the result of the activities of the National Watershed Congress, will likely be amended in 1956 to broaden its authority. Too, the Corps of Engineers and the Bureau of Reclamation each have acts now designed to place them into active participation in small project construction.

Though the many problems of water resource development remain unsolved, there is a clearly discernible interest in their solution. Evidence on hand seems to indicate that the emerging federal water policies will most likely take the middle position between policies currently in operation and whatever compromise can be reached among the interested groups. One point is agreed to by all—due to the vital nature of water resource development, we must receive maximum benefit from every dollar spent in this area.

Mayan Monarch

(From page 27)

spot-lighted Wrigley building and say it was made with chewing gum. This statement could almost be more than a figure of speech. A block of crude chicle is suggestive of a stone paving block. During his life, the Mayan Monarch saw two of his sapodilla neighbors bled to death by the little men.

This was the year that a seventy mile road into the Mayan Monarch's valley had been completed. Advisedly, we call it a road, as it would have made an excellent proving ground for new automobile models. Along this road came a small expedition to make a color motion picture of mahogany in its native jungle and of the trials and tribulations endured in logging mahogany.

In due course a tree was selected, a clearing made that would have been a Mayan farm many centuries ago. The tree was felled with grinding cameras in close attendance. As the dripping party gathered together after this "climax" shot, directors and camera men said "blah" in unison. Due to vines reaching from it into the tops of other trees, it didn't fall where it was supposed to fall. It eased itself down—it didn't crash! Just as when Casey struck out, there was no joy in "Mudville" that night. If that camp was not named "Mudville," it should have been.

The next morning word spread that the gringos wanted to film another tree, one vast in size like the oldsters in the camp claimed to

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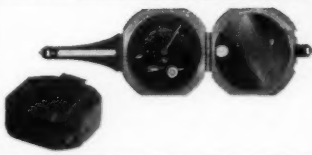
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La Plata is 35 miles from Washington, D. C., and those members arriving by air, rail or bus, should rendezvous at the AFA Headquarters Building, 919 17th Street, N.W., Washington, D. C. on Sunday afternoon, September 30. Bus transportation will be provided from the Headquarters Building to your motel at La Plata. We are located two blocks from the White House and other points of interest. This will afford you an opportunity to visit your National Headquarters.

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have seen. Finally, a sturdy Indian boy was seen talking (with gestures) to another Indian who, in turn, told the story in Spanish to the captain of the cutting crew. The captain with some English and mucho gestures told the story to the gringos:

"Three hours away is a caoba tree (Spanish name for mahogany), as wide as a house and so high that no one could see the top in the jungle. (Usually the case.) One cannot approach it because of the vines and the spreading roots. I saw it when I was hunting for deer."

Well, that was just wonderful! The boy hadn't gotten close enough to see the bark and he couldn't see the leafy top—and besides he didn't know where he was when he did see it. He was all fixed up with alibis before he started. He did have an honest and smiling face. The two big gringos decided it was another wild turkey hunt, but they said, "let's go."

The captain sent along two other machete boys to cut trail and off they went. For about a mile they had a trail and the going wasn't so bad except it seemed to be the hours for the bad little coral snakes to take a sun bath and where was there any sun for a coral snake except on a trail? Then, for no good reason, as far as the Yankee or the Chichagoan could see, the boys turned into the jungle cutting their way through a mass of vines, spiny palms and undergrowth. It became very apparent why travel was measured in time rather than distance.

The gents from up North grew very tired and developed a burning thirst. Already they had learned the meaning of "bejunca aqua" and called for it frequently. The machete boys obligingly disappeared in the jungle and were back shortly with four-foot sections of a thick vine pointed on one end like a tent stake. These were promptly up-ended and about half a glass of water trickled out. That was just about enough to replace the perspiration that dripped off while drinking.

Just as the non-tropical pair were about to call it half a day and turn back, the Indian boy became excited and pointed to a rocky cliff and told them in pure Mayan that the tree had found them. Another "come on" but this would be the last one—and it was. Soon a dark form loomed beyond the machete boys. The Mayan Monarch had been discovered.
(Turn to page 63)

What's NEWS across the nation

A STATE SENATOR, THE SON OF A FORMER GOVERNOR OF PENNSYLVANIA, and three other Indiana County, Pa., residents, all officers and stockholders of Musser Forests, Inc., have been named in a suit for nearly half a million dollars against the nursery filed by Attorney General Herbert B. Cohen. The company is charged by the Commonwealth with "conspiring to cheat and defraud" the state in connection with purchases from state nurseries of trees, seedlings and transplants. Cohen said the company violated conditions under which state seedling stock was sold, namely that trees were "not to be resold or used for ornamental purposes but were to be used only for reforestation or for wood products" in accordance with state law. The suit charges that the corporation purchased 2,787,000 seedlings between 1937 and 1950, and Cohen said investigation indicated "the defendants did not even own a good portion of the acreage listed in their applications."

THE DAUPHIN COUNTY (PA.) COURT, where the suit was filed, has been asked by the company to dismiss the triple damage suit on the grounds that the charges were "too vague" and were voided by the statute of limitations. "Allegations brought against the defendants are so deficient that they are flagrantly in violation of the law," said John Y. Scott, attorney for the firm. Previously Attorney General Cohen had said that "the presence of a Republican state senator and the son of a former Republican governor as members of the conspiracy may well have influenced the decision to pigeonhole the results of the investigation." In an advertisement published in the current issue of AMERICAN FORESTS, the Musser Co. states that it has cooperated for years with state nursery superintendents, and that "we can only conclude that the case . . . is politically inspired." Named in the suit by the Commonwealth are State Senator L. M. Peeler (R., Indiana County); Robert M. Fisher, son of former Governor John S. Fisher; Fred Musser, his wife Dorothy Musser, and G. W. Musser, a brother of Fred Musser, all of Indiana, Pa. The case is now pending.

ALLEGING "DUPLICATION, OVERLAPPING AND WASTE," a House subcommittee last month called for consolidating in one federal agency the forest programs now run by three separate bureaus. The Democratic majority of the Government Operations Subcommittee said the Agriculture Department's Forest Service should take over timber management functions now exercised also by the Bureau of Land Management and the Bureau of Indian Affairs, both of which are part of the Interior Department. Subcommittee Republicans said they plan to file a dissenting report.

THE HOUSE GROUP JOINED WITH THE SENATE INTERIOR SUBCOMMITTEE in hearings last fall on federal timber policy in the Pacific Northwest. The subcommittee's report was approved by the parent committee. The Democrats recommend that the President submit to the Congress convening in 1959 a reorganization plan allotting forest functions to the Forest Service. "Although the three federal agencies are performing the same timber-management functions in the same areas," the committee stated, "there are confusing differences in policy, method and procedure . . . the existence of separate and independently-managed agencies has led to three uncoordinated and inconsistent forestry programs."

THE COMMITTEE SAID THAT SINCE THE FOREST SERVICE MANAGES BY far the largest area of federal timber domain and is the most experienced of the timber agencies, it is the logical choice to take over a consolidated program.

LINCOLN, NEBRASKA'S HOTEL CORNHUSKER will be the headquarters for the National Watershed Congress September 18-20. "Where We Stand in Watershed Development" will be the subject of a panel discussion on September 18 featuring Ervin L. Peterson, Assistant Secretary of Agriculture; Clarence A. Davis, Under Secretary of Interior; and George H. Roderick, Assistant Secretary of the Army for Civil Affairs. Secretary of Agriculture Ezra Taft Benson will speak at a special luncheon on the opening day. The afternoon session will feature presentations by water experts on pertinent watershed development problems. They include Bill Durham, of the Fort Worth Press, Texas; Walter G. White, chairman, New Hampshire Water Resources Board; Harry B. Blaney, irrigation engineer, Agricultural Research Administration; and Chester S. Wilson, attorney and conservation consultant, Stillwater, Minnesota. Robert B. Crosby, former governor of Nebraska, will lead an evening panel on problems faced, solved, and remaining to be solved in the development of the 1,525 square mile Salt-Wahoo Watershed. A tour of the watershed will follow the next day.

THREE MORE STATES—VERMONT, CONNECTICUT AND NEW YORK—launched Tree Farm programs as of last month to bring the total number of participating states to 43, James C. McClellan, chief forester for American Forest Products Industries, Inc., reported last month. By the end of the year the program expects to have close to 10,000 Tree Farms in the program and over 39 million acres of woodlands under management.

"IT IS SOMEWHAT DIFFICULT TO UNDERSTAND WHY MORE FARMERS are not certified Tree Farmers," Mr. McClellan comments. "I know of no farmer who would think of planting his crop of corn and then just forgetting about it. He fertilizes and cultivates his corn and does everything he can to insure a bumper crop. On the other hand, a recent U.S. Forest Service survey reveals that more than half the nation's farmers are either completely ignoring their woodlands as a source of steady income or, at best, are giving them little or no care to insure steady, repeated crops of forest products.

"IN RECENT YEARS," THE AFPI FORESTER CONTINUED, "the average income of farmers has gone down, and many a farmer would do well to take a new look at his woodlot which he may have all but forgotten. With our population expected to be 75 percent higher by the end of the century, we are going to need more wood products in the years ahead. Future markets for just about everything the Tree Farm can produce seem to be well assured. Now is the time to start growing trees for that future market."

IN ITS LATEST REPORT ON TREE FARM DEVELOPMENT, it is interesting to note that this growth is characterized by a growing number of people who have purchased forest land and developed it as a Tree Farm for investment purposes. Not too long ago, only 20 percent of the Tree Farms were owned for investment purposes. Today, 30 percent are investor-owned, while farmers own 60 percent and industry the remaining 10 percent.

H. CLIFF HAMILTON, HEAD OF PUBLIC INSTRUCTION, West Virginia Department of Education, last month received special commendation from the West Virginia Forest Council for his successful eight-year campaign to include formal instruction in conservation in the public school curriculum. Under Dr. Hamilton's guidance, available conservation material has been revised for use at primary, intermediate, junior high and senior high school levels.

THE WEST VIRGINIA FOREST COUNCIL also decided to hold a special fire prevention conference before the spring fire season, and made plans to produce two television shows on fire prevention.

SCHOLARSHIPS-LECTURESHIPS in honor of the late Colonel W. B. Greeley, were announced last month by Nils B. Hult, president of the Industrial Forestry Association. These scholarships-lectureships have been established at the College of Forestry, University of Washington and School of Forestry, Oregon State College. In his announcement Mr. Hult said, "The Douglasfir industry is proud to commemorate the late Colonel Greeley, America's top industrial forester."

NOMINATION OF WESLEY A. D'EWART AS ASSISTANT SECRETARY OF THE INTERIOR remained unconfirmed as the Congress adjourned without favorable action by the Senate Committee on Interior and Insular Affairs. As a consequence, D'Ewart has left the Interior post and has been appointed as a special assistant in the office of the Secretary of Agriculture. He will be concerned chiefly with drought matters.

Mayan Monarch

(From page 60)

ered. It meant his doom as a jungle king, but it also meant that he would be seen and known to mankind longer than any mahogany tree that ever lived.

The rest of the jungle story is soon told. The back-track was easier and a lot faster. The chubby gringos stumbled into camp just at sundown and that means just before dark in the tropics. Arrangements were made with the captain for the next day's trip to the tree, in force. The directors and the two camera men, then better known as the "clinkaderos," talked half the night or at least until a hoarded bottle of Scotch had been emptied so that the bottle could be given to our Indian scout—any container is highly prized in the jungle.

A week was consumed in clearing another small farm to the south of the Monarch. The trail was widened almost to a highway as it would take a mighty tractor to pull out this tree, even when cut into sections. The axmen built a scaffold twelve feet from the ground. They stood barefooted on slender poles called a barbecue and cut down the Monarch with long straight-handled axes.

At last! The supreme moment! Three cameras were ready to catch the fall—one a closeup and in a dangerous position if anything went wrong. Suddenly the choppers came down from their perch like a pair of monkeys. They must have had a sixth sense for they were still running when there was a crack like the report of a rifle. Almost imperceptibly at first, the giant started for the earth where he had started nearly 400 years before. In the space of a few seconds, the tree landed in the jungle with a mighty crash followed by showers of limbs, leaves and debris; and much vocal protest by bird and animal denizens of the jungle.

The mighty trunk was cut into three immense logs and a tank-sized tractor pulled each log out to the trail to the main road. Then they were loaded on a diesel-powered truck designed for logging redwoods in the Pacific Northwest. The truck carried the logs to the Belize River but not in time for the summer's floods. The next year the logs were floated to seaboard and loaded aboard a steamer with doubled tackle.

The rest of the story concerns the Mayan Monarch. In due course of

time it was decided to haul "the big tree"—known in the books as No. 576—into the mill and see what was inside the then barkless logs. It strained the capacity of mighty machinery and a nine-foot bandmill to open the first log. And then the thrill of a lifetime! The Mayan Monarch was a figured tree—and what a figured tree!

The Mayan Monarch was not only huge in size but sound as a dollar and with hardly a defect or a blemish. The figure is bold, befitting the tree that produced it. The rolling figure suggests something of ocean waves or billowy clouds.

The sawmill did not finish the job on the Monarch. The logs were cut into huge quarters, shaped up and sent to the veneer mill. We will refrain from telling the number of feet of veneer that this tree produced, and we do not know the price that was paid for it. That is a closely guarded secret. If we knew, we wouldn't tell. Too many of our readers would hie themselves off to the jungles to find another Mayan Monarch.



SCM MODEL TREE PLANTER

Available for D2, T6, TD6, 40C, 420C.

Our five distinctly different models are designed for deep penetration and high survival in all soil conditions and terrain.

No distorted roots when Lowther machines are used.

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Nomination for Membership in THE AMERICAN FORESTRY ASSOCIATION

(Membership includes a subscription, for the duration of the membership, to the monthly magazine AMERICAN FORESTS)

To The American Forestry Association
919 17th Street, N. W., Washington 6, D. C.

I nominate _____
(NAME OF NOMINEE—PLEASE PRINT)

whose address is _____

_____ for Membership
in The American Forestry Association. Please send the nominee an Invitation to Membership which outlines the privileges and benefits of membership in The American Forestry Association.

My Name as Nominating Member _____

My Address _____

DUES: Subscribing membership per year, \$6; Two years, \$10; Contributing membership per year, \$10; Sustaining membership per year, \$25; Life membership (no other dues for life), \$150; Patron membership (no other dues for life), \$1000. Canadian postage 25c extra per year, Foreign 50c extra per year, on Subscribing memberships only.

9-56

Feature Photo of the Month

Photos used on this page will be of unusual rather than esthetic qualities and subject matter will be restricted to scenes, events, objects or persons related to the use, enjoyment or unique aspects of our renewable natural resources. For each picture selected AMERICAN FORESTS will pay \$10

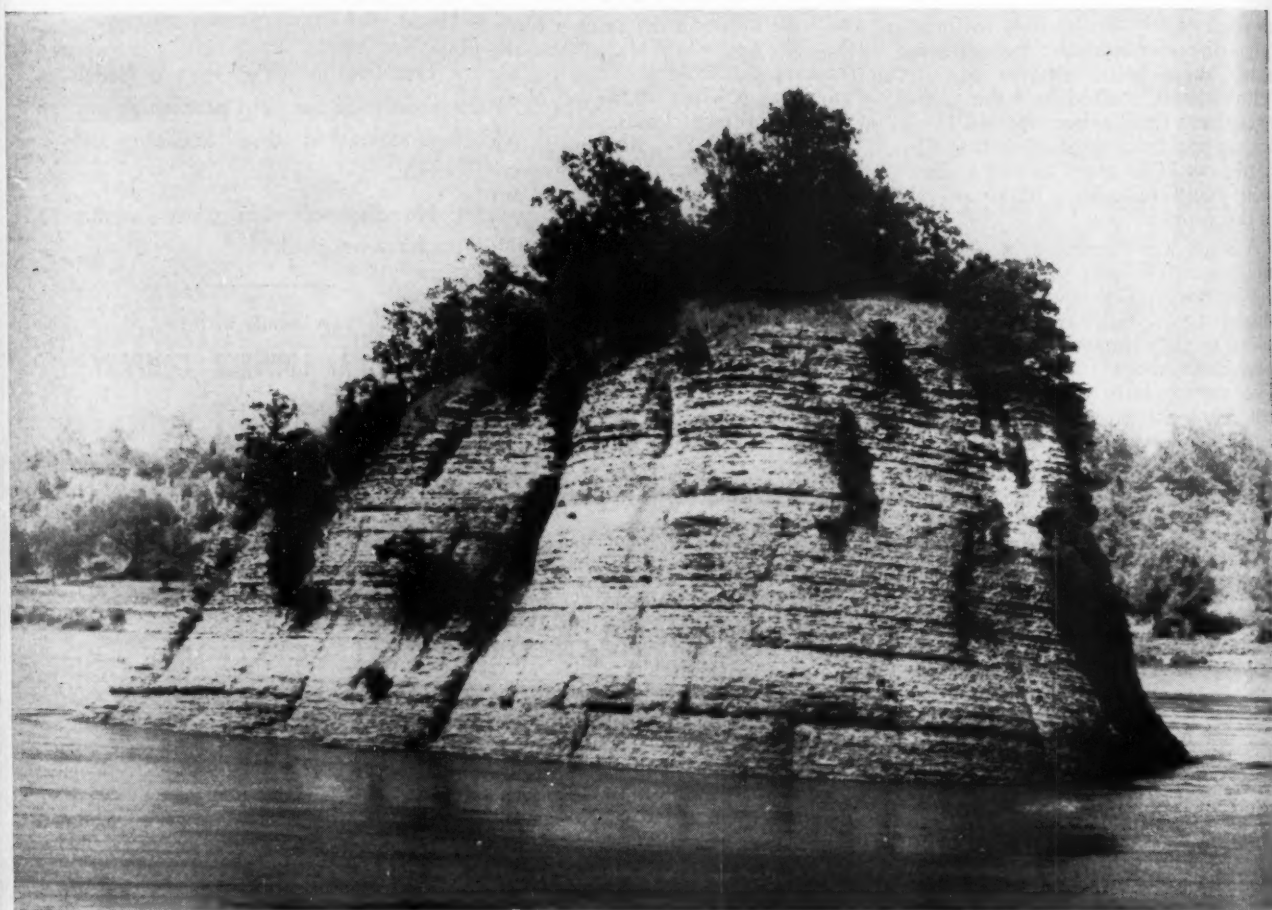


Photo submitted by Grover Brinkman, Okawville, Illinois

Tower Rock was once our smallest national park. Located in the Mississippi River near Grand Tower, Ill., it is about 60 feet in height and an acre in area. During Grant's administration, when the river was being dredged of traffic-impeding rocks to facilitate Civil War supplies, Tower Rock was left as a support for a proposed bridge. The bridge was never built, and the rock was forgotten. It is not recognized today by the National Park Service

TOP PRODUCTION IN THE BIGGEST TIMBER



The most powerful one-man chain saw you can own

The new Homelite 7-29 gives you the three key features you need for top production in the biggest timber . . . dependable power, quick starting, easier handling.

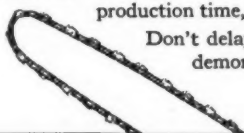
— *you can depend on the power*, a full 7 horsepower, to bring down trees up to 10 feet in diameter quickly . . . yet weighing only 29 pounds, it's light enough for work in small trees.

— *you can depend on quick starting* and smooth, continuous economical operation in

the most extreme weather conditions, with the 7-29.

— *you can depend on easier handling* too — in the roughest terrain. Because the 7-29 is perfectly balanced letting you cut from any position, any angle, with no adjustments, no loss of power. This means more production time, greater profits.

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Model 17 — an all-purpose saw that brings down trees up to 4 feet in diameter. Available with special brush cutting and clearing attachments for complete versatility. 3½ horsepower, 20 pounds.



Model 5-20 — All the versatility of the 17 with added power. 5 full horsepower — 20 pounds. Brings down trees up to 6 feet in diameter.



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This Caterpillar D4 Tractor with Mathis plow, severing roots cleanly, cuts a fireline 8 feet wide and 10 inches deep in the Orangeburg District, South Carolina.

STEADY WORKER

IN THE ORANGEBURG, SOUTH CAROLINA FORESTRY DISTRICT'S MOBILE FOREST FIRE FIGHTING UNIT

The Orangeburg District of South Carolina's State Commission of Forestry covers seven counties. It has more than 1½ million acres of woodland, predominantly pine. Because it is heavily populated and has a high incidence of fire occurrence, a heavy-duty mobile forest fire fighting unit is assigned to it on a 24-hour-a-day call. The unit includes this CAT* D4 Tractor with Mathis fireline plow.

Here you see the D4-Mathis team plowing a fireline 8 feet wide and about 10 inches deep. It cuts roots from 4 to 6 inches thick, severing them cleanly. When used fighting a fire, it has the capacity to do the work of more than a hundred men. Like all Caterpillar equipment, it has the stamina to keep working under the toughest going.

This stamina is engineered into every inch of the 50 drawbar HP D4. For example, a diagonal brace welded to each track roller frame maintains good track alignment under all conditions. Efficient roller, idler

and sprocket bellows seals keep lubricant in, and mud out, for a long life of trouble-free operation. And a steel drawbar, mounted well to the rear and slightly above the lowest portion of the tractor, provides better leverage and stability for drawbar work.

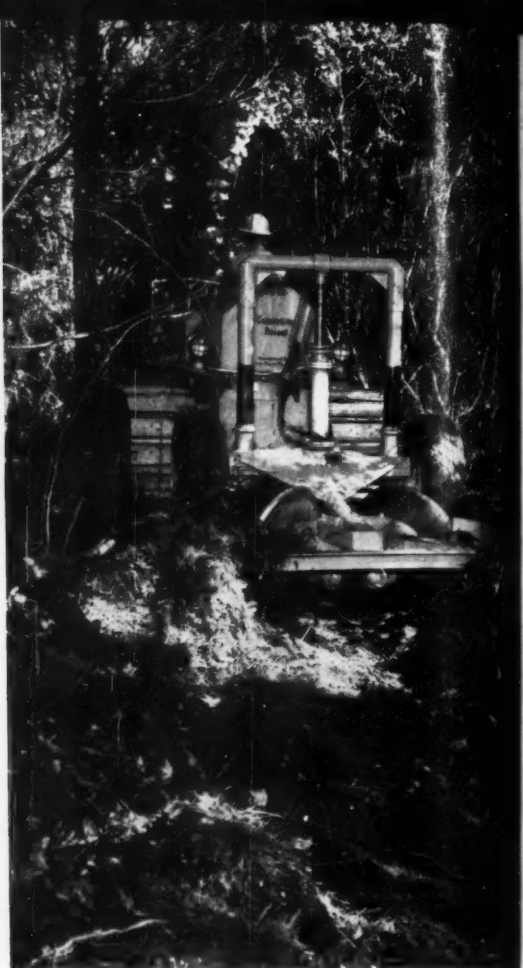
Used in drawbar operations or with a 'dozer, the D4 is built to do *more* work at *lower* cost with *less* down time than any tractor in its power range. Your Caterpillar Dealer, who backs you with fast service, will be glad to show you how it can pay off for you. Name the date—he'll demonstrate!

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